

SEPTEMBER 1960 • 40 CENTS

CONSUMER

BULLETIN

The original consumer testing magazine



Building a house?



Advice to back yard barbecuers



The parking situation

**Tests of
gas
refrigerator-freezer combinations**

Other tests and reports of interest to consumers

Bargains may be costly!
Tips on flashlights
Testing for shock hazard
Water piping problems

Chinaware frying pan
Phonograph records
Motion picture ratings
Refrigerator-freezer

Electric refrigerator-freezer

with
manual-defrost freezer,
automatic-defrost refrigerator



THE *Foodarama* style is available in both a "no frost" model, and in a conventional type with a freezer that must be defrosted from time to time by the user.

Consumers' Research reported on the "no frost" *Kelvinator Foodarama Model K 89M* in its July and August 1960 BULLETINS.

The *Kelvinator K 87M* differs principally from the *K 89M* in that it has a freezer that must be defrosted by the user, combined with an automatically defrosted refrigerator. The interior arrangement of the *K 87M* is also somewhat different from that of the *K 89M*.

As mentioned in the previous articles, Consumers' Research does not assign an *A-Recommended* rating to a combination refrigerator-freezer, unless, when tested in a room at 90°F, it provides an average freezer temperature of 5°F or below, when the food storage space is at an average temperature of 39 degrees. A refrigerator temperature of 39 degrees is considered satisfactory for the storage of most fresh foods, from the standpoint both of keeping quality and economy in operation. (A lower storage temperature, of course, means increased consumption of electricity.)

A. Recommended

Kelvinator Foodarama, Model K 87M (American Motors Corp., Detroit) \$650. A 2-door model with refrigerator and freezer side by side. Height, 63 in.; width, 41 in.; depth, 26½ in. Total usable volume, 15.2 cu. ft. (freezer 5.3 cu. ft., refrigerator 9.9 cu. ft.). Total shelf area, 25 sq. ft.

Performance in test: Time to lower temperature from 110° to 46°, average. Cost of electricity for operation, \$4.85 per month, at 90° room temperature (on an adjusted per-cu.-ft. basis, somewhat less than average—desirable). Operating costs were 20% less than for the self-defrosting model *K 89M*. The difference would come to about \$16 per year. Freezer temperatures were much more satis-

Most refrigerator-freezer combinations have the freezer compartment either across the top or across the bottom of the box. The design of the Kelvinator Foodarama is entirely different, for it is a two-door model with the refrigerator and freezer side by side—freezer at the left, refrigerator at the right.

factory in this \$100-cheaper manual-defrost model. Average temperature of frozen food, -2.0° with refrigerator at 39° (very good; this is 13° lower than in the frostless model). Running time, 70%. Time to make 3.75 lb. of ice cubes, 1¾ hr. (0.47 hr. per lb.), much faster than average.

Comments: This model differs from the *Foodarama Model K 89M* reported in CONSUMER BULLETIN for July and August in that the freezer requires manual defrosting and the interior arrangement is somewhat different. On the *K 87M*, all of the freezer shelves except two are refrigerated, and air circulation is by gravity instead of a fan; there was also about ½ cu. ft. more usable space in the freezer of the *K 87M*, because of the absence of the automatic defrosting mechanism.

In the refrigerator section, a standard type of vegetable crisper of porcelain-enamel is located near the bottom of the box. (In the frostless model, there is a crisper with a transparent glass door, located at the top of the box.) The refrigerator section of the *K 87M* is cooled by a refrigerated plate which automatically defrosts at the end of each refrigerator cycle. Door arrangements were the same on both models.

Judged a very good box, much to be preferred to the "no frost" model *K 89M*.

(Concluded on page 16)

The Consumers' Observation Post

SCHOOL GRADES OF TEENAGE STUDENTS WHO DRIVE CARS are usually lower than those of students without cars. That was the conclusion drawn from a survey by Allstate Insurance Co., which included 20,000 high school juniors and seniors in the United States and Canada. Car ownership had more effect on grades than permission to use the family auto. Of the juniors, only 16 percent of the top students owned cars, against 42 percent in the failing group. When extensive use of a car was permitted during the week, those who went out every night were more likely to be failing in their school grades, in the ratio of 20 to 1. Car usage, when restricted to Saturday and Sunday, not only had no adverse effect, but the survey showed that a greater percentage of top students was in this group than students who used no car at all.

* * *

SILK ORGANDY AND SILK ORGANZA present problems in dry cleaning. The stiffening (sericin) gives the fabric its characteristic crispness, but bending or rubbing the fabric causes the sizing and fibers to break, warns the National Institute of Drycleaning. Since the fabric is dyed at low temperatures, the dye may crook off in dry cleaning and light-streaked areas may appear, particularly on dark-colored fabrics. According to the N.I.D., streaked areas are most noticeable at the collar line, around the waistline, and at the bottom of the fold or hem, but sometimes streaks develop in irregular lines throughout the garment also.

* * *

CAMERAS AND PHOTOGRAPHIC EQUIPMENT are being sold to tourists at duty-free stores around the world and the American photographic dealers are quite unhappy over the situation. Bargain centers at the airports of Shannon, Ireland; Frankfurt, Germany; Hong Kong; Panama; and in various parts of Canada along the United States border, offer duty-free cameras at bargain prices, along with binoculars, clocks and watches, jewelry, perfumes, china, and clothing. The plan for the Canadian shops is to make the merchandise available only to Americans or other tourists. The display rooms will show samples from which an order is placed and for which a receipted sales slip is given. The tourist, on crossing the U.S. border, makes out the customs declaration and gives the receipt to the United States border official. After the declaration is approved, the tourist mails the receipt back to the duty-free shop and the camera or other purchase is mailed to him at home. Dealers along the United States-Canadian border have protested to various camera manufacturers that this will hurt regular dealers, who will no doubt be expected to service the cameras when they get out of order or need adjustment.

* * *

HOW EFFECTIVE IS THE HEATING SYSTEM IN YOUR HOME? The trade association in the field, the National Warm Air Heating and Air Conditioning Association, reports that 80 percent of all heating systems are "lousy," on the basis of their extensive field investigations. The leading trade journal suggests that the consumer probably received more for his money when he purchased a home heating system a dozen years ago than he does today. It seems that heating contractors just don't know all they should about making a good installation.

* * *

FURNITURE WITH A CLEAR FINISH is better than it used to be, but it is still not good enough. Mr. J. A. Hager, vice-president of the Grand Rapids Varnish Corp., recently pointed out that there is still need to develop furniture finishes that offer better resistance to lighted cigarettes, mars, scratches, perfumes, and fingernail-polish removers. Hair preparations also cause trouble.

TENDER BEEF that has been produced by an artificial method is now available in certain sections of the country. The process, patented by Swift & Co. under the trade mark "ProTen," is based on the intravenous injection of certain food enzymes into cattle minutes before they are slaughtered. Tenderizing action is designed to begin when the meat is being cooked. The new process is expected to eliminate shrinkage and discoloration produced by the customary aging process, which normally requires about two weeks, and do away with this waiting time altogether. The "Pro-Ten" process is reported in use at the Swift plants at Ocala, Fla., and St. Joseph, Mo. We shall be interested in hearing from our readers on how well they like "ProTen" beef.

* * *

TELEVISION COMMERCIALS for the much advertised Regimen reducing tablets have come under fire of the New York City District Attorney's office. After a study of several months, Frank S. Hogan, District Attorney of New York City, presented information before a grand jury which returned a criminal information against the manufacturer, two of his companies, and the ad-agency handling the Regimen account. Mr. Hogan reported that the persons who "weighed in" to show how much weight they had lost by using Regimen while eating as much as they had previously, were paid performers. They did show a loss of weight, which Mr. Hogan reported was not due to Regimen, but to the fact that they were on "crash diets." In one case, a performer on the drastic reducing diet suffered from malnutrition and was placed under a physician's care. Mr. Hogan commented that the three dollar box of tablets, enough for ten days, was produced and packed for 18 cents, which he said indicated "the worth of the product."

* * *

AUTOMATIC WASHERS with Easy's "Velvapower" transmission now carry a lifetime warranty. Endurance tests carried on in coin-operated laundry establishments have given the company a picture of the ability of the product to withstand hard and abnormal usage, according to a report in Electric Appliance Service News. The warranties will apply to all machines now in dealers' hands, as well as to the new ones. Bear in mind, however, that the warranty is for parts only and makes no provisions for labor, a not inconsiderable part of the cost of repairs.

* * *

THE MUCH-ADVERTISED AILANTHUS TREE, or tree of heaven, is called a pest by horticulturists at Rutgers University College of Agriculture. They say it belongs only on the ocean front where nothing else will grow easily, or in city back yards. Anywhere else it is a pest and a nuisance. The experts list its liabilities as an uncontrollable capacity to reproduce, small branches, sparse shade, and pollen to which some people are allergic.

* * *

MAGNETIC EARRINGS are making their appearance in some stores. Patented by Coro, Inc., they are designed to be more comfortable than the screw or clip types. Each earring is made in two pieces; one containing the magnet is placed back of the ear lobe; the decorative half is placed in front of the lobe and the magnet acting through the ear lobe is supposed to hold it in place. The technique worked up to a certain point, but tests by Consumers' Research indicated that if the wearer inadvertently brushed her hand across her hair in the vicinity of the earrings or put a telephone receiver to her ear, the slight pressure was enough to break the magnetic pull and dislodge the two pieces of the earring. Both would immediately drop and might roll to some inaccessible corner, requiring a search before the two pieces could be reassembled and reapplied. If this were to happen outdoors, or in a public gathering, one or more parts of the earring would be easily lost. The item is an entertaining novelty and is available in the \$1 to \$2 price range, but seems not as yet to be a satisfactory or dependable device.

(The continuation of this section is on page 37)

Consumer Bulletin

THE ORIGINAL CONSUMER INFORMATION MAGAZINE

Consumers' Research is a non-profit institution. It is organized and operates as a scientific, technical, and educational service for consumers. The organization has no support from business or industry. Its funds come solely from the ultimate consumers who read Consumer Bulletin.

Scientific and technical staff, editors, and associates: F. J. Schlink, R. Joyce, D. C. Aten, M. C. Phillips, Erma A. Hinek, F. X. Hinek, Donald M. Berk, and A. R. Greenleaf. Editorial Assistants: Mary F. Roberts, B. Beam, and Ellen J. Snyder. Business Manager: C. D. Cornish.

Consumer Bulletin is issued monthly by Consumers' Research, Inc., at Washington, N. J. Copyright, 1960, by Consumers' Research, Inc., Washington, N. J.; all rights reserved. Subscription price (12 issues), \$5 per year, U.S.A. (Canada and foreign, \$5.20). For libraries, schools, and colleges, a special subscription of nine monthly Bulletins (October-June, inclusive) is available at \$3; Canada and foreign, \$3.20.

For a change of address, give your old address as well as your new one, including postal zone number. Allow five weeks for the change to become effective.

Responsibility for all specific statements of fact or opinion at any time made by Consumers' Research lies wholly with the technical director and staff of the organization.

Note: Consumers' Research does not permit the use of any of the material in its Bulletin for any sales promotion, publicity, advertising, or other commercial purposes. Application for permission to reprint for other purposes should be made by letter to Consumers' Research, Washington, N. J.

Listings usually are arranged in alphabetical order by brand name (not in order of merit) under each quality or performance rating. A numeral 1, 2, or 3 at the end of a listing indicates relative price, 1 being low, 3 high. Where the 1, 2, 3 price ratings are given, brands in the 1, or least expensive group, are listed alphabetically, followed by brands in price group 2, also in alphabetical order, etc. A quality judgment is wholly independent of price.

This publication is authorized to be mailed at the special rates of postage prescribed by Sec. 132.122, Postal Manual.

Entered as second-class matter, November 9, 1934, at the Post Office at Washington, N. J., under the Act of March 3, 1879; additional entry at Easton, Pa. Printed in U.S.A.

VOL. 43, NO. 9 CONTENTS SEPTEMBER 1960

Electric refrigerator-freezer.....	2
With manual-defrost freezer, automatic-defrost refrigerator—Kelvinator Foodarama	
Are you planning to buy or build a house?.....	6
Discussion of points enabling one to recognize good construction	
Refrigerator-freezers using gas for fuel.....	10
Reports and ratings of two brands	
Note for trailer owners who wish to stay alive.....	12
Tips to the back yard barbecuer.....	13
Points of interest to all outdoor chefs; use of correct methods improves flavor and wholesomeness of broiled meats	
Solutions to the parking meter problem.....	17
Textile fibers used in curtains and draperies.....	20
Characteristics of common curtain and drapery fibers	
Have you a kick to make?.....	21
How to make an effective complaint about unsatisfactory or defective merchandise	
Corrosion in water-heating systems.....	22
There are ways of holding it to a minimum. Much depends upon the nature of your water supply, the temperature of the water, whether it is hard or soft, whether it carries metallic impurities	
Tips on flashlights.....	25
Electrical testing in the home.....	27
A report on devices that may be used for checking electrical appliances in the home, to avoid unnecessary shock hazards	
A Belgian magazine and a state food inspector comment on food ingredients and labeling.....	29
Camera and lens bargains may be costly—W. A. Perine.....	30
New kind of ceramic cookware.....	39
 FEATURES	
The Consumers' Observation Post.....	3
Off the editor's chest—Informed salesmen vs. order takers.....	32
Brief cumulative index.....	33
Phonograph Records—Walter F. Grueninger.....	34
Ratings of Current Motion Pictures.....	35

Are you planning to buy or build a house?

*Discussion of points enabling
one to recognize
good house construction*

There is so much that is involved in building or buying a house that to discuss the subject even in a limited way could fill several books. This article will therefore deal briefly with some of the major points of house construction, with suggestions about things to look for in buying or building a home. The information here will help the consumer with many points that will enable him to judge whether a house is properly and soundly constructed.

A LONG, careful look into the construction of a house, whether you plan to buy or build, can save considerable money in future maintenance, and avoid the annoying and sometimes serious inconveniences that go with mistakes in design or skimpy construction or workmanship. It cannot be emphasized too strongly at the outset that in becoming a homeowner, one should not be hasty in reaching a decision, and it is important not to let one's "first impression" of a plan or an existing house influence the decision.

What should a well-built house contain?

The first things to consider and decide upon are the floor plans, the outside design, and the location of the house. It is important to arrange the house so that the three main "zones"—living, sleeping, and working—serve the family's needs to best advantage. Each zone should be properly related to others. The house should be so arranged with reference to the street, the outdoors, and the orientation with respect to the sun, as to serve the particular family's needs, or if you do not expect to live in the house permanently, the



Ewing Galloway

needs of a typical American family who may rent or buy the house later on. Before buying land on which to build your new house, check the local building and zoning laws, as they may affect your house and the character of the neighborhood. Especially check on tax rates, and whether one should expect a sharp rise in these for some reason perhaps not immediately apparent to a stranger to the community.

Which style of house suits your needs best?

There are basically four styles from which one may choose. These are the 1-, 1½-, and 2-story house, and the split-level. Each has certain advantages as well as disadvantages.

A 1-story house eliminates stairs, offers convenient indoor-outdoor living on one level, and makes outdoor repairs and painting easier. A 1-story design is particularly desirable for elderly people, or for a family in which there is a disabled or invalid person. However, since bedrooms and bathrooms are on the same floor as the kitchen and living room, it is difficult at times to entertain without disturbing children asleep in the bedrooms, or adult members of the family who are not participating in a meeting or a party. Noise transmission from the bathroom is often also a problem unless the bathroom walls and door are soundproofed.

A 1½-story house may be looked upon as an approximation to a 2-story house. It provides extra room on a second floor, but savings in cost as compared with the costs of a 2-story house are relatively small since greater outlays are required somewhere else to provide for proper construction. For example, since the second story is, in effect, a converted attic, extra thick insulation should be provided under the roof to avoid very unpleasant heat in the upper rooms during the summer and uncomfortably low

and uneven temperatures during the winter.

The 2-story house costs usually little more overall to build than the 1½-story house. It has the advantage of separating the bedrooms from the noise centers of the home better than any other type of house. It permits building the most living space on the least land. Outdoor repairs and painting as well as washing windows and installing and removing storm windows are more difficult than with 1- or 1½-story houses.

The split-level, with its different levels of floors, is well adapted to a sloping or hillside piece of land. On level land, however, it offers poor indoor-outdoor living facilities, since part of the house is below grade and much of it is above grade. This arrangement requires the climbing of many steps. Uniform heating of a split-level house is not easily achieved; the lowest level and the room over the garage are usually cold while some rooms (usually bedrooms) on the higher levels are likely to be too warm. More so than in any other type of house, the heating system installed in a split-level must be carefully designed for the house, so that it will function satisfactorily.

How big should a house be?

Remember that each square foot of area increases the initial cost of the house and adds to later costs for plumbing, heating, and maintenance, as well as to your local tax bill. Yet, a house should be big enough to provide ample "usable" space (floor area minus area occupied by furniture, appliances, heating equipment). The size of a house is given in total square feet of finished floor area. It includes all finished rooms that are heated, including halls, stairs, and closets, but not open porches, basement, garage, or attic.

The total number of square feet of floor area is a good yardstick for determining how much house you can expect to get for a given amount of money. For example, building costs, while they vary considerably in the same area, as well as from one part of the country to another, run from about \$10 a square foot for minimum construction to \$20, including heating equipment and electrical installation other than appliances. A 30 x 40 foot house, adequate for a family of four, containing roughly 1200 square feet, will thus cost in the neighborhood of \$18,000 with building costs at \$15 per square foot. This \$18,000 figure, however, can be reduced by about \$1500 or so by using lower grade materials or eliminating certain refinements in construction throughout the house.

Which heating system?

The two most popular heating systems installed in new houses are forced warm air and hot water radiation. Warm air systems are lower in first

cost than hot water systems, and, if designed and installed properly, will perform satisfactorily in any house.

A properly designed baseboard or perimeter hot-air system will have the warm air diffusers located on the exterior walls, preferably under windows, with adequate cold-air intake registers in or near the floor. This arrangement assures the discharge of warm air at the coolest places and reduces drafts.

With hot water systems, baseboard radiators are most popular today. These long, low radiators, about seven to ten inches high, perform very satisfactorily. Baseboard radiators, too, should be located along exterior walls. A radiant hot water heating system has the piping imbedded in the floor, usually concrete. It can provide comfortable warmth, but if a pipe develops a leak, the concrete floor has to be broken up. This type of heating arrangement, of which a great deal was expected some years ago, has become much less popular in recent years.

Steam heating is rarely installed in houses nowadays. Some older houses still have steam heating systems, but even these are gradually being replaced with other more efficient systems, generally hot water with baseboard radiators.



One-story house—convenient indoor-outdoor living.



One-and-one-half story house—substitute for a two-story house.

Gas or oil? or electricity for heating?

In many areas, gas is not piped in, and except for bottled gas, the choice is oil, or electricity. Where natural gas is available, compare the three for expected future operating costs before deciding. With oil at 15 cents per gallon, about average today, natural gas rates should average about 11 cents per therm for the two to be competitive. A therm is a standard measuring unit equal to 100,000 Btu. The local gas company will supply you with rates for gas for heating and other purposes.

Either fuel can be used whether the house is to have warm air or hot water heat. Gas offers certain advantages over oil which make it attractive. Cost of gas burner installation is lower (the gas burner is simpler, and no storage tank is required), it requires less service, and gas burners last longer than oil burners. Unlike oil burners, gas burners do not require annual cleanings, thus, saving the cost for such cleanings. The hazards in connection with gas installations are sometimes serious (see October 1957, February 1958, August 1958, August 1960 CONSUMER BULLETINS), and houses are occasionally blown to bits due to malfunctioning of piping or regulating equipment.

In many older homes, coal is still the fuel used for heating. It is difficult to make close comparisons between heating costs with coal and fuel oil, but as a rough approximation coal at \$27 per ton would be comparable to oil at 15 cents a gallon. The main objections to coal are the dust and the problem of removal and disposing of ashes.

Electric heat is still a relative newcomer for home heating because of its high cost. However, it is becoming more popular in some areas, and at rates of about 0.5 cent per kilowatt-hour could be about as economical as oil at 15 cents per gal-

lon. To avoid high heating costs at present electric rates—about 1½ cents a kilowatt-hour in many areas—it is recommended that a house that is to be heated electrically should be built with about 6 inches of insulation in the roof, 4 in the walls, and 2 in the floors over unheated basements and more under floorboards of floors exposed to outside air temperatures, e.g., unheated garage.

Is the house well insulated?

How well the house is insulated will determine, in large part, how high or low all your future winter fuel bills will be, and will determine, too, what size heating plant will be necessary to heat the house. Where fuel is not inexpensive, it is unwise to skimp on insulation. Adequate insulation, that is in the ceilings, walls, floors over a garage or crawl space, plus weather stripping around doors and windows, will not only make a house much more comfortable during cold and hot weather but can cut fuel costs considerably. It should not be difficult to heat a properly insulated home having 1200 square feet of living area in cold climates of say 6000 degree-days annually for about \$150 during an average winter. Vapor barriers are required to keep the moisture within the house from passing through and causing the outside paint to blister and peel.

How much storm windows will reduce your heating fuel costs, if at all, will depend on how well the rest of the house is insulated. If there is little insulation or no insulation in the ceilings or walls or floors over a garage or carport, the effectiveness of storm windows is not likely to be sufficient to be noticeable, since heat losses that take place through the walls and ceilings will be large. If, however, the greatest heat loss is through windows, storm windows will effectively reduce over-all heat loss.

Foundation or crawl space

What lies beneath the floor on the ground level will have a marked effect on how comfortable the first floor rooms are with respect to drafts and dampness, and how much it will cost for fuel for heating. A basement (or properly designed and constructed crawl space where there is no basement) adds to comfort and economy.

Poured concrete is best for basement foundation walls, at least 8 inches and preferably 12 inches thick, especially for a brick- or stone-faced house. Also suitable for foundation walls are concrete block and cinder block, in that order of preference. Poured concrete walls installed by a competent contractor and carefully supervised workmen give the best assurance against leaks and wet basements, but it should be understood that, if the ground is water logged, as it will be in



Two-story house—permits building most living space on least land.



Split-level house—various levels make heating difficult.

many locations during part of the year, some water, and perhaps a great deal, is likely to find its way into the basement through cracks or through porosities in the concrete. In some locations, this difficulty cannot be avoided without exercise of extreme care in the original construction and provision of means for drainage of ground water and water from the roof gutters away from the foundation.

The ground below the crawl space should be covered with a durable vapor barrier material and the space should be at least 30 to 36 inches high (preferably more), so that a person can crawl through if necessary to make repairs, remove a dead animal, etc. For slab-on-ground construction, avoid sites where there is ground or surface water. The thickness of the concrete slabs should be at least 4 inches.

Electrical system

Nothing is more exasperating than to have a fuse blow when some appliance is turned on. When this happens often it very likely means that a circuit is overloaded, and the fuse necessary to safeguard against fire from electrical overloading cannot pass the amount of electricity that is required to supply the appliances being operated at the time. To take care of today's normal electrical appliance loads and the number of appliances commonly used in homes, and to avoid possible future expense to remedy inadequate wiring, be sure the house is wired with a three-wire, 240-volt, 100-ampere service. 100-ampere service should be the minimum.

Another requirement for satisfactory service from all electrical appliances is an ample number of branch electric circuits from the main switch box. A reasonable number in most of today's homes would be 9 or 10 active circuits—more would be even better—plus two or three spare

circuits for future appliances, such as an air conditioner, workshop tools, etc.

Very few homes have more convenience outlets and switches than are needed. However, having one outlet (except in the basement or garage) for every 10 to 12 feet of wall, more where a door or a fireplace comes between the outlets, will usually be adequate.

There should be a light switch at the entrance of every room, at the top and bottom of a stairway, and at garage, and basement doors. A switch at the top of a stairway should be well away from the top step so there is no possible danger of falling down the stairs while trying to locate the switch.

Outlets in the kitchen, laundry, basement, garage, workshop, in a patio, and on porches should be of the grounding type that will take a 3-prong plug. This is important from a safety angle to reduce the risk of electric shock on floors of concrete, stone, tile, or other surface that is wet or is electrically close to the ground.

Which shingle is best for the roof?

Roof-covering materials differ widely in their endurance and price. Generally speaking, as one increases, so does the other. Asphalt shingles, most widely used of all the materials available, are relatively low in cost, but, of course, not so durable as shingles of asbestos cement, slate, and tile, or roofing of aluminum and copper.

Minimum grade asphalt shingles can be expected to give from 10 to 15 years of service, the better grade 20 years or more. Still more durable materials will give 30 years or more. Wood shingles should not be used for roofing, on account of the extra hazard of fire.

White- or white-painted materials will give high sun heat reflectivity, which means a cooler house during hot weather.

General

If there is no public sewer system, estimate about \$200 in most cases to have a septic-tank system installed. *Caution:* Don't skimp on the size of the tank installed or on the drainage area. An undersized sewerage system will likely become a major nuisance and source of expense after a few years.

Estimating costs for a used house presents many problems and such costs are necessarily highly variable. One may, however, figure, as a rough approximation, close to the price per square foot of a new house, say in the neighborhood of \$12 to \$15 per square foot. Reconstruction of old houses involves more expense than one usually expects, especially if the job is "non-standard" and the efficiency of labor might be accordingly low.

(Concluded on page 31)

Refrigerator-freezers using gas for fuel

WHEN Servel, in 1957, decided to discontinue the manufacture of gas refrigerators, it was expected that this type of appliance would disappear from the American market. Gas refrigerators were much less efficient than electric refrigerators using a motor and compressor, were costly to operate except where gas was very cheap, and were not capable of maintaining satisfactorily low food-keeping temperatures in hot weather. Another disadvantage, and a most important one, was the hazard of carbon monoxide poisoning, even death, from gas refrigerators that had not been regularly and skillfully inspected and serviced (see "Warning," page 11).

Now that natural gas is available at relatively low prices in a great many cities and towns in the United States, there is clearly a large potential market for efficient and safe gas refrigerators. At the present time, only two manufacturers, both using Servel patents, have entered this field—Norge and RCA Whirlpool. Both firms offer only refrigerator-freezer combinations.

The advertising slogans of the old gas refrigerator era "No moving parts" and "Silent" do not apply

Gas refrigerators, which have been off the market for some time, are now available again. The models now offered are refrigerator-freezer combinations. At this time, two companies are making them, Norge and RCA Whirlpool, both operating under Servel patents. Some components of the Norge are made in Sweden.

Consumers' Research reports here the results of tests, just completed, of these new models of gas refrigerator-freezers.

to the newest models, for electric fans are used to circulate the refrigerated air in the *RCA Whirlpool*, and electric motors are used to operate the automatic ice makers in both makes. Tests by Consumers' Research indicate that both Norge and RCA Whirlpool have done a good job in designing their gas refrigerators so they will maintain satisfactorily low temperatures. The *RCA Whirlpool* has an air filter which must be removed and cleaned once a month by washing in a warm detergent solution. With the *Norge*, it is necessary to clean regularly the condenser located on the back of the cabinet. Failure to follow these instructions will result in higher food temperatures and increased operating costs of both makes.

In the event of an electrical power failure, the *RCA* model ceases to refrigerate, as the burner flame is automatically reduced to a pilot flame. When the electricity is turned on again it is necessary only to reset the defrost timer clock. The *Norge*, which does not depend upon fans for air circulation, will continue to refrigerate during an electrical power failure, but the defrost system will be inoperative. With a gas supply failure, on either make, the gas supply valves will close automatically. The burners must be relighted by a gas serviceman when gas service is restored. (On the *Norge*, this could possibly be done safely by the homeowner, though usually it would be best to send for a serviceman.)

Operating costs

The cost of operation of the *RCA Whirlpool* (a frostless model) was about 30 percent higher than that of the *Norge* with a manual-defrost freezer, on an adjusted per-cubic-foot basis. While both used



RCA Whirlpool GA 1400

approximately the same amount of gas per adjusted cubic foot of storage space, the *RCA Whirlpool* used over four times as much electricity (due to its three fans, and an electric heater used in defrosting). However, for the *Norge*, the cost of operation on an adjusted per-cubic-foot basis using natural gas at 20 cents per therm (100,000 Btu) and electricity at 3½ cents per kilowatt-hour was below the average of manual-defrost electric refrigerator-freezers recently tested. The *RCA Whirlpool's* operating cost was slightly below the average for the frostless electric models. With bottled gas of 2500 Btu per cubic foot at 50 cents per therm, cost of operation would be regarded by some as almost prohibitively high, about 2½ times the cost with use of natural gas.

In calculating operating costs, the figures of 20 cents per therm for natural gas and 50 cents per therm for bottled gas are used. The price of gas varies widely in different sections of the country and depends also on the amount used. Due allowance for the local price for gas should be made by the individual consumer in judging costs of refrigerator operation in his area. For example, in a home where natural gas for heating is used, the price per therm may be 15 cents. Electricity was calculated at 3½ cents per kilowatt-hour. Costs for operation at higher or lower rates for gas and electricity can be figured by proportion. For example: If you can buy gas at 15 cents per therm and electricity at 2 cents per kilowatt-hour, cost for operation of the *RCA Whirlpool* would be $3.05 \times \frac{15}{20}$ or \$2.30 for gas, $1.90 \times \frac{2}{3.5}$ or about \$1.10 for electricity, giving a total cost per month of \$3.40. (The figures \$3.05 and \$1.90 will be found in the *RCA Whirlpool* listing, at the end of this article.)

Warning

In a number of large cities, deaths have been reported from carbon monoxide poisoning associated with improperly maintained gas refrigerators, and there has been, in some cases, the necessity of frequent service calls because of the sooting up of the burner which resulted in failure to refrigerate properly and produced an odor of unburned gas. In one period of 16 months, it was reported that there were 18 deaths in New York City that could have been caused by carbon monoxide from defective gas refrigerators, and the Director of New York City's Department of Health issued a notice to all gas users that everyone should see that the room in which a gas refrigerator stands is properly ventilated, for example by leaving a window open two inches from the top at all times, 24 hours a day, even in severe weather. He pointed out that even before a refrigerator produces carbon monoxide it

emits other gases which have an odor (carbon monoxide does not). A gas refrigerator that emits any odor is not working properly and is in need of repairs. Other warning signs are increased gas consumption, or sudden appearance of deposits of soot on the wall near the refrigerator.

In view of these considerations, we advise that anyone planning to buy a gas refrigerator should first make sure that competent service is available in the locality. Carbon monoxide, which is itself odorless, may be given off as the result of sooting up of the burner, a dirty flue system, formation of corrosion products, improperly adjusted flame, or it may be caused by insufficient ventilation in the room where the refrigerator is located.

The adjustment of the flame is vitally important. The amount of air mixed with the gas should be such that the flame does not show any yellow. On the other hand, there should not be too much air, evidenced by a noisy or unstable flame.

Service manuals for gas refrigerators place great emphasis on the knowledge and care of servicemen to see that the flame is of the correct type, which insures efficiency and safeguards against the production of carbon monoxide.

Consumers should under no circumstances allow a non-expert serviceman to attempt an adjustment or repair of a gas refrigerator. This work must be done only by the authorized serviceman of the



Norge Customatic CTGI-110

particular company; the job is not one to be entrusted to an amateur, or a handyman.

Both of the gas refrigerators displayed the A.G.A. (American Gas Assn.) approval seal.

A. Recommended

Norge Customatic, Model CTGI-110 (Norge Sales Corp., Merchandise Mart Plaza, Chicago 54) \$500. A 2-door model with freezer at the top. Height, 69½ in.; width, 31 in.; depth, 33 in.

Rated total volume, 10.78 cu. ft.; actual usable total volume, 9.7 cu. ft. (freezer, 1.7 cu. ft.; refrigerator, 8 cu. ft.). Actual shelf area, 17.5 sq. ft.

Performance in test: Time to lower temperature from 110° to 46°, about twice as long as for the Norge conventional electric model. This, however, is to be expected with gas refrigerators. With control set to give 39° in refrigerator at 90° room temperature, average temperature of frozen food was +3° (satisfactory).

Operating cost per month at 90° room temperature with natural gas of 1040 Btu per cu. ft. at 20c per therm (100,000 Btu), \$2.70; electricity, 45c; total, \$3.15.

With bottled gas of 2500 Btu per cu. ft. at 50c per therm, \$6.75; electricity, 45c; total, \$7.20.

The automatic ice maker operated satisfactorily, but it was very slow in making ice. It produced 1 lb. of ice cubes in 14.3 hr.

Comments: The refrigerator section defrosts automatically once every 24 hr.; the defrost action is controlled by a time clock. (The operation requires a minimum of about 20 min.) Freezer requires manual defrosting 2 or 3 times per year.

The refrigerator section is well arranged. It has 2 sliding, full-width wire shelves, 1 fixed wire shelf adjustable to 2 positions, 1 fixed-position wire shelf about ½ full width, and 1 full-width glass shelf over 2 half-width porcelain-enamel crispers. It was necessary for the user to stoop to obtain access to the glass shelf. A loose plastic meat keeper with transparent plastic cover is provided. There is ample room for the storage of large items.

The refrigerator door has 2 full-width removable shelves, one of which was wide enough to handle ½-gal. milk containers and large bottles; there is 1 small removable shelf, a butter compartment, and an egg compartment with 2 removable trays (each holding 8 eggs).

Installation must provide at least 12 in. of free air space above the cabinet, 3 in. at the sides, and 2 in. at the back, for proper air circulation. Doors had flush-type hinges.

RCA Whirlpool, Model CA 1400 (Whirlpool Corp., Evansville, Ind.) \$700. A 2-door model with freezer at the top. Height, 65 in.; width, 32 in.; depth, 32½ in.

Rated total volume, 13 cu. ft.; actual usable total volume, 11.6 cu. ft. (freezer, 2.1 cu. ft.; refrigerator, 9.5 cu. ft.). Actual shelf area, 19.7 sq. ft.

Performance in test: Time to lower temperature from 110° to 46°, approximately the same as the Norge gas model. With control set to give 39° in refrigerator at 90° room temperature, frozen food was +4° (satisfactory). The temperature in the meat drawer in the refrigerator was 4° lower than that in the refrigerator (desirable).

Operating cost per month at 90° room temperature with natural gas of 1040 Btu per cu. ft. at 20c per therm (100,000 Btu), \$3.05; electricity, \$1.90; total, \$4.95.

With bottled gas of 2500 Btu per cu. ft. at 50c per therm, \$7.60; electricity, \$1.90; total, \$9.50.

The automatic ice maker operated satisfactorily and produced 1 lb. of ice cubes in 4.2 hr.

Comments: The refrigerator section defrosts automatically at the end of each cooling cycle. The freezer section defrosts automatically once every 24 hr.; this action is controlled by a time clock. Three fans are used: the refrigerator and absorber fans operate continuously; the freezer fan runs continuously except for about 1 hr. (the period in which the freezer is defrosting) in each 24 hr.

The refrigerator section is well arranged. It has one full-width and one ¾-width sliding shelves, one ½-width fixed shelf, a hollow glass and plastic fixed-position full-width shelf through which air is circulated to provide quick cooling of desserts, etc., and a rigid plastic full-width shelf over the crispers, a sliding porcelain-enamel meat drawer, and 2 half-width porcelain-enamel crispers. There was ample space for the storage of large items. The refrigerator door has 2 full-width fixed-position shelves, one of which is wide enough for ½-gal. milk containers; there was a butter compartment, and 2 removable egg trays (each holding 13 eggs).

Installation must provide at least 4 in. of full air space above the cabinet, but the refrigerator can be installed with the back close to the wall and the sides against cabinets. Doors had flush-type hinges.

Note for trailer owners who wish to stay alive

It is important to note that all gas space heaters and water heaters, gas refrigerators, and gas ovens used in trailers should be equipped with a vent that discharges or terminates at least 8 inches above the roof line. The importance of this regulation will be evident from the fact that at least 16 persons have died in trailers equipped with side-wall vented *Thurm* bottled-gas heaters up to the spring of 1960. At least 14 other persons

were overcome by carbon monoxide, but were rescued in time. Other makes of heaters than the *Thurm* were involved in some cases where hunters were overcome by carbon monoxide. An entire family at a vacation cottage was wiped out by carbon monoxide from a faulty gas refrigerator that had not been serviced in many years. See also column 2 on page 16 of this BULLETIN for a discussion of a somewhat similar hazard.



Ewing Galloway

Tips to the back yard barbecuer

Points of interest to all outdoor chefs; use of correct methods

improves flavor and wholesomeness of broiled meats

IN discussing the smoked and blackened meats now served by many restaurants, one newspaper columnist referred to them as "brands not snatched quickly enough from the burning." In the same vein, a popular magazine referred to the "Nero-like chefs who throw a fortune in beautiful steaks onto a roaring fire, then stand by as the steaks are carbonized." A popular newspaper cartoonist referred to the outdoor chef who used for charcoal the steaks he broiled at the last cookout.

There is evidence that the vogue for meat heavily contaminated by the smoky flames of burning grease is waning; this loss of popularity is most desirable, for there is definite reason to suspect harm to health from two causes when meat, fish, or poultry is broiled in the way described. In the first place, the overheating of fat and fatty areas on the food causes chemical changes which are definitely harmful to digestion.

In the second place, the smoke evolved in the process of burning the grease that falls into the fire implies a definite hazard, for research indicates that ingested food carrying smoke particles and deposits may be an important factor in the causation of cancer. Indeed, the first scientific knowledge of chemically-caused cancer was in relation to long-continued contact of the skin with soot. A number of complex chemical substances present in smoke and in soot are clearly implicated as carcinogenic (capable of starting or causing cancer). They may do far more harm, and more rapidly, to the alimentary tract than they are known to do to the body's outer surface, the skin.

In view of the great popularity of outdoor broiling, and the fact that nearly everyone is exposed to it either as chefs or as consumers of the products of outdoor barbecuers, we are glad to present information on outdoor cookery which

should be of interest to everyone who likes a tasty and well-broiled steak, chop, or hamburger.

There is a very useful pamphlet on the subject entitled *Outdoor Cookery for the Family*, Extension Bulletin 354 (32 pages, well illustrated), published by Michigan State University, East Lansing, Mich., available at 10 cents to Michigan residents and 25 cents to persons outside the state (remittances should be in cash). The pamphlet discusses the equipment to be used in outdoor cookery, and its authors, Anita C. Dean and Robert E. Rust, have made it clear that smoking and blackening of the food are not a necessary part of outdoor cooking.

Thus, the authors advise that meat should be so placed when possible that the dripping fat will not fall into the fire; that when a spit is used, the fire should not be built directly under the meat. They explain, too, how the flaming of the fire may be controlled with a clothes sprinkler (a rubber bulb with a sprinkler nozzle is a readily available device). By this means, or by the use of various squeeze-bottle devices sold in hardware and house furnishing stores, the person presiding at the grill may add a small amount of water to the fire whenever necessary to keep the flames of burning grease from rising and leaving a smoky residue on the steak, chops, or chopped meat that is being cooked.

Some care should be used in adding water, for if an excess is used, it may too greatly reduce the temperature of the burning coals at the point of application. If a little too much water is used, the steaks or hamburgers may show the effect of being boiled rather than broiled; such a result could tarnish the reputation of an outdoor chef.

Prevention of smoky flames important

Haley M. Jamison, Donald H. Kropf, and Janie McDill, authors of a pamphlet published by Clemson College Extension Service, are also aware of the harm done by smoky flames, and they note that when a flame appears it should be doused with a little water. The Clemson pamphlet is from the Agricultural Information Services, Bulletin Room, Clemson College, Clemson, South Carolina, and it is entitled *Outdoor Cookery*, Circular 460 (31 pages, many good illustrations). There is no charge for the Clemson College Circular.

The editor of *House Beautiful Magazine* presented an excellent article on the ways of broiling meat without deposits of smoke, in the issue of August 1958; her article emphasized the point that fat should not be allowed to fall into the fire and burn up. Further, she notes, if you are broiling in the oven, you should not let the fat drippings char, burn, or blacken in the bottom of the broiler. The magazine noted that burned fat and

In the article "'Charcoal-flavored' steaks without charcoal" in the April 1959 Bulletin, we called to our readers' attention the undesirable practice now very common in restaurants (even good restaurants), diners, and road-side stands of broiling meat, poultry, and fish in ways that deposit a layer of greasy smoke and carbon upon the food. We noted that with the new broiling equipment that is now in common use, many public eating places feature steaks, chops, and hamburgers heavily smoked with flames that rise from the burning drippings. Broiling by this method soots and blackens the broiled meat to such an extent that it becomes unpleasant in flavor to persons who are used to steaks and chops broiled by proper methods. More important still is that the layer of smoke and carbon carries unwholesome and potentially harmful by-products to the digestive system of the consumer.

burned meat may contain chemicals which have the impressive name *aromatic polycyclic hydrocarbons*, and some of these are known to be carcinogens. The magazine emphasized a point that is perhaps not appreciated by those whose exposure to barbecued meat has been exclusively at the hands of those of the smoke-soot-and-char school of outdoor cookery, that meat tastes better when it is not coated with such materials and has the flavor of meat rather than burnt grease, carbonized steak, and fat-soaked cinder.

The article in *House Beautiful* mentions the various ways of keeping fat from dripping into the fire. First, by cutting off all visible, solid fat; and second, by cooking *in front of* a vertical fire. When the fire or the source of radiant heat is beside or above, rather than under the meat, the fat drippings do not fall into the fire to make flames and greasy smoke of which a part will be condensed and redeposited on the meat. Proper broiling is done with invisible radiant heat, and not with smoky yellow flames that rise about the meat and spread over its surfaces.

The meat being broiled should be turned with tongs, rather than by stabbing it with a fork, which causes loss of juices. A metal spatula or pancake turner is a useful tool when hamburger is being prepared. Meat should not be turned too frequently, and salt, for those who wish it, should be applied only at the last minute. Patties of ground meat should not be flattened while they are cooking.

Use of lighter fluid

Some outdoor cookery experts consider that charcoal lighter fluid is the most practical means of lighting a charcoal fire. They warn that gasoline should not be used because it is very dangerous; that kerosene and fuel oil will leave a very undesirable odor and aftertaste on the food. If lighter fluid is used, it must be employed with caution and never applied to a fire which is already burning. A case was recently reported of a clergyman critically burned by a sudden flash of flame following a squirt of lighter fluid. The popularity of the lighter fluid is largely because it greatly speeds up the operation, but it would be better to avoid the fluid and start a charcoal fire with a little paper with shavings and small splinters of wood, a time-tried method that with a little practice will do the job very easily.

In one instance where a ham had been roasted in a special grill under a closed hood, two expert diners-out detected a faint taste of petroleum distillate. To some extent this might be a problem even when broiling is done entirely in the open air, without a hood or a cover, and for this and other reasons, the use of a lighter fluid as an igniter might to advantage be avoided when there is no hurry in getting the fire into condition for broiling. Certainly it would be desirable to avoid the use of lighter fluid where the grill has a hood which can be closed over the meat, for example in roasting a chicken or a ham. In any event, there is some question as to the use of a grill with a hood, for a free flow of air about the food is desirable. Smoke and greasy fumes should be carried away, not held in contact with broiling or roasting meat. Though grills with a dome or hood are featured in the higher-priced brackets, it would seem that, from the standpoint of wholesomeness of the food, the *simplest* kind of outdoor broiler or brazier will do the best job. With grills, high price does not assure best performance.

A further word about grills

A grill for outdoor broiling should be mounted on a solid structure built with a broad base so it cannot easily be tipped, and with legs so fastened that the accidental turning of one leg cannot cause it to tip or spill. (Some manufacturers cheapen construction by building braziers with legs that can turn and let the whole structure topple over.) No chances should be taken in this way since the spilling can cause a fire or serious burns to a person near by.

The charcoal should be allowed to burn for 20 minutes or so before starting to cook, so there will be an even high heat. This stage will be reached when the charcoal is covered about $\frac{2}{3}$ with gray ash which shows around the edge of

the charcoal pieces. The bed of charcoal should be thin.

There should be about three inches of space between the coals and the grill. A grill that permits raising or lowering of the broiling surface is desirable, so as to permit regulating the speed of cooking. The grill may be rubbed with a piece of suet to prevent sticking of the meat. (Meat will be more tender, and less likely to be burned and charred if the cooking is not done too rapidly.) With very thick steaks or chops, the distance from the source of heat should be increased in order that the interior of the meat is properly done before the exterior becomes overcooked or burned and charred. A thick steak may be more evenly cooked if it is allowed to warm up to room temperature before broiling.

The Michigan bulletin notes that for anyone who likes hamburgers rare, an *all beef* mixture should be used, for there is danger with all pork or mixed beef and pork products that may not be thoroughly cooked. A further point might be made that the butcher should not grind beef for hamburger in the same meat chopper which he has used for cutting up pork products. Trichinosis, a rather serious disease, often follows the consumption of undercooked pork. In a recent incident, 13 persons were made ill at a summer cookout in New York State following the eating of hamburger contaminated with the organism of trichinosis. If there is the slightest doubt about the condition of the meat and its complete freedom from particles of pork, it should not be eaten rare. It is wise to know your butcher and to know that he is aware of the dangers of contamination of chopped beef with particles of pork; the trichinosis disease is not to be taken lightly; it is said to infect something like 15 to 17 percent of the human population, and in occasional cases it may cause quite serious illness.

Use of charcoal as fuel

Charcoal is available as either lump charcoal or briquettes. While briquettes give the most uniform fire and are easy to handle, the ordinary lump charcoal is preferred by some expert outdoor chefs, who question the desirability of the binder material used in making briquettes. Thus Jack Denton Scott notes, in the American Legion magazine, that the added substances are not of the kind he wishes to have flame up under a sirloin steak, and for this reason he has always used ordinary hardwood charcoal. Hickory is especially favored for this use, and the Michigan pamphlet specially recommends charcoal from slow-growing northern hardwoods.

Its authors note that savings will be made by not buying small packages of charcoal which are

self lighting. They also caution against the use of imitation charcoal. We note that some briquettes now sold do not claim to be charcoal; in an effort to achieve maximum convenience and freedom from grime, some manufacturers are marketing through supermarkets a briquette which is partly charcoal and partly made of materials of unstated composition and questionable suitability for use as a fuel for cooking.

The Federal Trade Commission recently filed a complaint against a company which was selling briquettes described as charcoal, which consumers assume are made with wood, but were actually made of lignite or brown coal. Lignite so used might present a special problem when used in grilling of foods because of its possible high content of volatile matter that would be given off during the burning.

Lump charcoal and briquettes sell at retail at about the same price, and it is said that most consumers prefer lump charcoal for cooking purposes. Charcoal in lump form is not only easy to ignite, but burns more easily down to a glowing bed of coals. Lump charcoal is bulky and crushes rather easily and has the disadvantage that it must be stored in a completely dry place. (If it absorbs moisture there is some danger of spontaneous combustion.) Absorption of moisture causes it to deteriorate in any case. Briquettes are more convenient, though less desirable; they are likely to be preferred by those who conduct barbecue operations on a large scale, or by restaurants and dining-car operators who wish to keep a fire burning more or less continuously. Briquettes are not so well suited for ordinary picnics; they are slow to reach the right condition for grilling and are likely to continue burning long after the typical steak, chops, or hamburger has been broiled.

Note that when the fire is no longer needed, it should be well soaked with water to cool it; this applies, too, to the ground beneath the grill, for people have been seriously burned by stepping on the hot surface of the soil left by the long-continued downward-radiated heat of the grill. The ashes should be soaked with water and then soaked again, and finally covered with wet soil. The experienced outdoorsman will not leave a fire that is still smoking. It is important to keep children away from charcoal fires. The gray coals that on first appearance may seem quite harmless may cause serious burns.

Important note to all "grillers"

Never bring a picnic grill indoors to be operated, unless it will be well vented to the outdoors, as, for example, by being placed all the way back in the opening of a fireplace with a good draft. (The matter of a good draft is important because a fireplace with a cold chimney will very often fail to carry smoke and gases upward and out of the house.) The Michigan State Health Department has noted two separate instances of houses full of people who were overcome by gas from use of picnic grills being operated indoors. This point is particularly important at the present time, for big stores, whose managements should know better, are selling for use *outdoors and indoors* the type of Japanese grill known as hibachi. ("Ideal for indoor or outdoor cooking," says the ad of a leading New York City department store.) These grills are sold even in variety chain stores, at about \$7. Teachers of safety in the schools should call to their students' attention that these and other grills burning wood, charcoal, or briquettes cannot be used safely indoors. (Even in a fireplace, their use is likely to present a hazard.)

Electric refrigerator-freezer

(The beginning of this article is on page 2)

* * *

The following condensed listings of refrigerator-freezer combinations are brought forward from the July and August issues.

Frostless type

A. Recommended

Amana FOF 125, Coldspot (Sears-Roebuck's Cat. No. 46-6560), Gibson G-169F01.

B. Intermediate

Frigidaire FP-142-59, General Electric BG-155, Kelvinator Foodarama K 89M, Leonard L 89M.

Conventional or standard type

A. Recommended

Frigidaire FD-13T-60, Hotpoint EW12A, Philco 14RD06, Westinghouse REA-13.

B. Intermediate

General Electric BJ-13T, Norge CB-F14, RCA Whirlpool GS-12T0.

C. Not Recommended

Admiral 14RF65.

Solutions to the parking meter problem

The first article containing a critical discussion of the operation of parking meters and their faults, and the way in which they defraud trusting motorists, appeared in the July 1959 issue of *Consumer Bulletin*. That article described the hoax that is being perpetrated on the gullible American public by the "municipal parking monopolies." Tests by CR indicated that all seven brands of meters studied in its tests merited C-Not-Recommended ratings; their performance was objectionable for many reasons including the fact that: (1) they did not give the motorist a "metered receipt" of time allotted or paid for; (2) their operation was unreliable, particularly under extreme conditions of temperature and humidity; (3) they had no "counter" to keep a legal record of coins deposited; and (4) they were too easily opened by non-authorized personnel.

A better parking meter

A number of suggestions and comments on the use of and operation of parking meters were received as a result of the article on "The parking meter problem" in the July 1959 *CONSUMER BULLETIN* which aroused wide interest among municipal authorities and others. One reader described an unusual meter that he had seen in operation in the Westminster and St. Marylebone sections of London, England. This meter, called an *Excess Charge* or *Excess Time* meter, was unique in the experience of Americans, for it had obviously been designed with the rights of the public in mind. Consumers' Research felt that a report on a parking meter that does not "take" its customers would be of interest to readers, including especially all those who are responsible for the administration of street traffic in cities and towns.

It was found, upon inquiry, that the meters used in the Westminster and Marylebone parts of London are authorized by the Road Traffic Act of 1956 (sections 19 to 24) and meet the specifications of the British Transport Ministry. The dials on meters meeting the specifications must be plainly marked on both sides and calibrated in 5-minute intervals.

Further, the dials must be divided into three sections (see Figure 2). The first section (white in color) is marked HOURS and indicates that the motorist can buy either one or two hours of parking time where he parks his car. The second section (yellow in color) is marked EXCESS PERIOD and also has a two-hour time period. This

section is sometimes called a "debit section" because it provides an indication of the amount of time which the motorist has overstayed the time originally paid for. The motorist pays for this EXCESS time when he returns to his vehicle (he can either pay an attendant or send the money to the Town Council within 7 days).

If a motorist overstays this "excess period" (2 hours in the London area), the meter pointer enters a third zone (red in color) marked OFFENSE on the dial. If the pointer is in the offense zone, a summons can be issued to the motorist. An

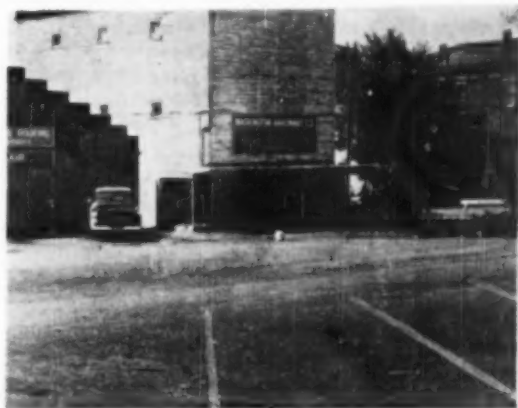


Figure 1—A portion of the rear area of a store that has been converted as a solution to the parking problem. Attractive "show windows" and specially marked entrance have been built at the rear of the store. A portion of the "back yard" has been converted to a paved, marked, parking lot.



Figure 2—At the right is shown that side of the new British "Civil Rights" parking meter facing the motorist; at the left, the insides of the meter. The pointer indicates that the motorist has used about one hour and 20 minutes of his "debit" or excess period. The timing mechanism is just inside a weatherproofed flat cylinder at the center. A part of CR's test equipment is located to the right of the meter.

advantage of this third section is that it is calibrated in 5-minute intervals for a period of one hour, and can be used to establish definitely the length of time the car overstayed the permitted period.

Consumers' Research obtained samples of the London meters for examination and testing. The device (Figure 2) is equipped with two flags. One of these, marked **EXCESS CHARGE**, is colored yellow. This flag appears in the window at the end of the time originally paid for and denotes the beginning of the "debit" time, or time for which the motorist must pay extra upon his return to his car. A second flag is marked **PENALTY** and is colored red (it is partly hidden behind the support in the picture). The red flag appears in the window at the expiration of the *excess* period, that is when the pointer enters the *offense* period.

A meter having the characteristics described would be entirely satisfactory for use in many parking areas in the United States. It is obvious, however, that there would have to be a drastic change in the basic philosophy underlying the use of meters. It would be necessary, for example, that the monies collected from parking meters be considered supplemental to other municipal income rather than essential for regular budget balancing purposes, and the town fathers would have to be more interested in using meters to prevent overlong use of parking spaces than in collecting an "ounce of blood" from every single autoist who parks his car, as a means of increasing the municipality's tax income.

There is, in addition, an element of belief in the honesty of the average citizen implied in the design of the English meter that some local authorities—both municipal and judicial—in the U.S. would be well advised to weigh, with a view to

treating automobile owners as taxpayers who pay the city officials' salaries, buy the meters, and pay for their cars' use of the streets.

The fact that the London type of meter offers some protection to motorists, and offers some degree of freedom from harassment under the criminal code, is substantiated by the following comparison. During 1959, more than 10,000 parking tickets were issued to motorists in Montclair, N.J. (population about 45,000). During approximately a six-months' period in 1958, only 115 citations were issued by the City of Westminster (a part of London, England, having a population of about 150,000), and not all of the 115 citations were simple "parking tickets." The analysis of these 115 cases was as follows:

Description of case	No. of cases
Failure to pay initial charge.....	41
Failure to pay "excess" charge.....	21
Number of actual "OFFENSES" (red flags).....	22
Attempts to postpone indication of OFFENSE.....	7
Intent to defraud (inserting foreign objects).....	1
Failure to give information regarding driver identification.....	23

Information available justifies the following conclusions: The traffic control subdivisions of the British government endeavor to protect both the motorist and the integrity of the Government as an agent of the public interest. American municipalities commonly show no concern over the lack of consideration of their government agents for the rights of the taxpaying, government-supporting "customers" and use any means available to assure that their municipal parking monopolies make the largest possible profit from parking meter violations.

Other solutions to the problems raised by un-

fair operation of parking meters have been sought in some American communities. One of these is the use of "electronic parking." In several instances, parking lots for from 50 to about 200 cars have been established. Entrance and exit to these lots are controlled by electronic devices which open or close gates similar to those at railroad crossings. A control gate which is activated either by insertion of a coin or a special punched card held by the customer into an electronic device which opens the gate (exit), is shown in Figure 3. The cost to the taxpayer (or motorist) of such electronic equipment is about half that of parking meters per car served.

In many areas of our country the municipal authorities have refused to respond to comments and suggestions by merchants and motorists. In some of these areas the merchants have initiated a plan of their own to solve the problem. They simply convert the rear facade of their stores into attractive show windows, and the areas behind their shops into parking lots for their customers. Conversion of this unused land into free parking lots has resulted in an increase in trade of 30 percent to 40 percent in some cases. There is no doubt that in some cities street congestion and

parking difficulties have interfered with business and more or less forced migration of stores and shops to the outskirts of many cities and towns.

B. Intermediate

Her Majesty's "Excess Time" Parking Meter, 5-hour Westminster type (Made by Venner Limited, Kingston By-Pass, New Malden, Surrey, England) Spring-wound clock timer required rewinding every 5 to 7 days. The clock timer is in a weatherproof box; the external mechanism is partly weatherproofed. The dial is of adequate size and divided into three zones, one of which is a 2-hr. "excess period" region intended to protect the civil rights of motorists (British). Dial calibrated on both sides in 5-min. intervals in accordance with specifications of the Transport Ministry.

The meter passed CR's low-temperature and high-humidity test. Meter has two flags—yellow, *Excess* and red, *Penalty*—which functioned properly during tests. Coin mechanism not tested in detail, as samples tested called for British coins. (CR has no information regarding limits of size and weight uniformity of British coins.)

A model tested was modified by Consumers' Research engineers after their tests to include a "coin counting mechanism"; this mechanism counted properly for a total deposit of 10,000 coins. Consumers' Research feels that this meter comes closest of any meters examined to being worthy of an *A-Recommended* rating for use in the United States.



Figure 3—Electronic control equipment for the exit gate of a modern parking lot. A coin or "punch card" can be inserted in the control console immediately behind the sign in the picture to activate the gate-raising mechanism. The cost of such equipment is considerably less than that of parking meters, per car accommodated.

Textile fibers used in curtains and draperies

THE selection of curtains is a highly personal matter and depends to a great extent on the scheme of decoration used in the home. On the other hand, the consumer may expect greater satisfaction if she has available information on the characteristics of the fibers used in the usual curtain fabrics. This information will help her get the best service in day-by-day use of her curtains and draperies.

Window curtains which are light in weight are likely to be made of fabrics that by their very

nature have a low tensile strength. Fabrics for draperies are likely to be stronger and longer lasting. If you are buying lined draperies, try to get some sort of assurance that the lining fabric will be as shrink-resistant as the drapery fabric itself; otherwise unsightly puckers may result from laundering or cleaning. Laundering can be less frequent if draperies and curtains are cleaned with a vacuum cleaner every week or so to remove dust.

To avoid disappointments caused by improper

Characteristics of common curtain and drapery fibers

Characteristics	100% cotton	100% acetate and solution-dyed acetate	100% acrylic and modacrylic	100% glass fibers	100% nylon	100% polyester	100% rayon and solution-dyed rayon
Physical character	Depending on construction, harsh or soft hand. Drapes well.	Soft, lustrous. Drapes well.	Soft hand. Drapes well.	Drapes well. Is translucent.	Soft hand.	Soft hand. Drapes well.	Soft hand. Drapes well.
Care and cleaning	Machine and hand washable. Needs ironing unless treated to give drip-dry, no-iron finish.	Dry clean primarily. Can be hand washed in some constructions. No-iron finishes can be applied.	Hand washable. Dry clean primarily. Resists spotting. Holds crease when wet. Dries rapidly.	Washable. Drip dry, no-iron. Dries rapidly.	Washable. Dry cleans.	Washable. Holds crease when wet. Spots wash off in water. Needs little ironing.	Hand washing or dry cleaning recommended.
Abrasion resistance	Good	Fair	Good	Fair	Excellent	Excellent	Fair to good
Wrinkle resistance	Poor	Good	Good	Excellent	Good	Excellent	Fair
Durability	Good	Fair	Excellent	Excellent	Very strong. Holds pleats.	Excellent	Fair to good
Resistance to mildew	Attacked, unless specially processed.	Good	Not attacked.	Not attacked.	Not attacked.	Not attacked.	Attacked
Resistance to heat	Excellent	Fair	Poor to fair	Excellent	Fair	Fair	Good
Resistance to fire*	Poor	Fair	Does not support combustion.	Fireproof	Melts before burning.	Melts before burning.	Burns relatively fast; depends on construction.
Resistance to deterioration by sunlight	Fair	Excellent colorfastness in solution-dyed. Average for regular acetates.	Fair. Darkens after long exposure.	Excellent. No effect.	Good for bright yarns. Poor for semi-dull. Loses strength after long exposure.	Excellent behind glass. Loses strength after long exposure.	Excellent for solution-dyed fabric. Average for regular rayons.
Dimensional stability	Good if properly processed.	Good	Very good	Excellent	Good, when properly heat set.	Excellent, when properly heat set.	Fair

* See text.

This table based to a considerable extent on information in Home Furnishings Daily, May 31, 1960.

care of the fabric, follow the instructions on the tag or label (and be sure to get one).

Although many fibers are used in combinations with others in making both curtains and draperies, the table on page 20, based largely on information from the trade paper, *Home Furnishings Daily*, will be of some help.

Studies made by the National Institute of Dry-cleaning have shown that the deterioration of fibers in sunlight, always an important factor in the serviceability of window curtains and draperies, is dependent on the fiber and also on the fineness or thickness of the yarn from which the fabric is woven and the looseness or closeness of the weave. The finer the yarn and the looser the construction, the less resistant a fabric is to sunlight. Dull and semi-dull yarns are less resistant to light than

bright or shiny yarns. Delusterizing or adding of pigments to make bright yarns dull or semi-dull also increases susceptibility to damage by sunlight.

Resistance to fire also depends on factors other than the nature of the fiber—tightness of weave and length of nap, to mention just two. The only sound basis for an evaluation of flammability is a test of the specific fabric, and institutions, in selecting curtain or drapery fabrics, should arrange to have flammability tests made. The data in the table, however, afford the consumer some degree of guidance on the question of flammability; the judgments shown must be regarded as very rough approximations only, and are to be accorded only very limited weight. Fabrics of glass fiber are the only ones that are fireproof.

Have you a kick to make?

Here's how to make a complaint about unsatisfactory or defective merchandise

OCCASIONALLY a purchase will turn out to be unsatisfactory. You have a better chance of getting some constructive action to remedy the difficulty, if you write a reasonable letter setting forth in detail the objectionable features or inadequate performance of the product. Remember that although the retailer or factory may be willing to give you an adjustment, either will be unlikely to welcome suggestions on how it should run its business.

Consumers' Research offers the following general guide for constructive action.

1) Telephone calls are a poor way to register a complaint; they put the burden of getting the facts down and on record, on someone who may be casual, inattentive, or just plain lazy. Set down in writing the following information about the item:

- a. The brand name and model number of the item, or other identification.
- b. The price you paid.
- c. Where you bought it.
- d. When you bought it.

2) Outline clearly just how the product or service failed, or fell short of requirements; why you are dissatisfied with it.

3) Explain what effort you have made to remedy the difficulty; what this cost in time or money.

4) Send this information first to the retailer who sold the product to you, and in writing, especially if it is a large department store or other large organization.

5) If you do not obtain satisfaction in a reasonable length of time, write to the manufacturer addressing the letter to the president of the company or the vice president in charge of service at the company's home office.

a. Send a copy to the local dealer, and so state on the original.

b. Send a copy to the local distributor, and so state on the original.

6) State specifically what adjustment you wish to have made. Keep in mind, however, that an appliance out of order can usually be made to operate, and it will almost never be replaced by a new one even if you were unlucky enough to have bought a "lemon." On the other hand, a garment that has failed in some important respect may be replaced.

7) Before you mail anything, be sure that you have been reasonable, factual, clear, specific, patient, and firm, that you have been sufficiently detailed in your statement that the dealer or manufacturer will have a good basis on which to work with his own people or with a supplier.

Corrosion in water-heating systems

You can't lick corrosion, but there are ways of holding it to a minimum. Much depends upon the nature of your water supply, the temperature of the water, whether it is hard or soft, whether it carries metallic impurities. Loss of electrical safety is involved in some methods of mitigating corrosion damage.

CORROSION is the major cause of failures in water heaters, and electrolytic action is at the root of the trouble. A water heater, in combination with the piping connected to it, forms, in essence, a galvanic cell which functions like the battery in your flashlight. Such a cell is formed and electrical current flows whenever two dissimilar metals are placed in electrical contact with each other—such as brass or copper piping connected to a galvanized water tank. The electrolyte is the water flowing into or from the tank.

When such a cell is formed, the electric current which flows tends to cause one of the metals to be corroded away. The rate at which corrosion proceeds is dependent upon a number of factors, chiefly the particular metals present and their relation to each other, the temperature, and the substances dissolved in the water and its conductivity.

Possible solutions to the corrosion problem

One obvious solution to the problem is to use copper piping with a copper or monel tank or galvanized piping with a galvanized tank. Copper piping is very much favored over galvanized piping in all homes built today for reasons of economy and convenience, and for the reason that copper piping lasts a long time before it fails by corrosion or becomes plugged up with corrosion products. However, a copper or monel tank is expensive, and has some other disadvantages. Thus, very often, such a solution is impracticable. For a variety of reasons, components of two or even more different metals or alloys must normally be used in the homeowner's water supply system.

Corrosion problems so produced can be diminished by the use of rubber or plastic couplings, so-called dielectric unions, bushings, nipples, or gaskets placed between the two different metals so as to separate them electrically. With this construction, there is, in effect, an electrical insulator between the different metals. The elements that form the galvanic cell are well separated, so that

the flow of electric current is reduced. This will tend greatly to reduce the rate of corrosion at critical points at which dissimilar metals are mechanically close together in the system.

A dielectric union or other type of insulator will not stop or greatly mitigate corrosion if the water has a substantial content of copper dissolved in it from copper piping used in the system "upstream" from the tank or possibly already present in the water supply after having been leached from sources in the earth or carried in a stream as metallic pollution. When copper ions, carried by the water, come into contact with the zinc coating inside a galvanized tank, some are deposited on the tank wall as metallic copper. If the tank is constructed of galvanized steel, miniature galvanic cells are thus formed at these points which produce a corrosive action similar to that previously discussed.

Water which has a high content of ammonia or carbon dioxide, especially likely to be present in ground water from a spring or well, is most undesirable from a corrosion standpoint because it is very prone to cause any copper in the system to dissolve and form copper ions. To alleviate the condition, one can add lime to the water supply, a procedure that can be accomplished by installation of an automatic feeder in the incoming line. Sometimes this condition is so bad that water from a well or spring will be run through a concrete tank containing marble chips, which have the effect of neutralizing the acidity due to carbonic acid (dissolved carbon dioxide).

Grounding for electrical safety

The use of an insulating coupling or dielectric union interrupts the electrical continuity of the hot-water system so that it will no longer provide the electrical grounding for an appliance, radio, or even telephone, in any part of the house. If any appliance that is connected to the system should fail, for example, by the effects of a lightning stroke striking a power line, it is possible that the whole

metal tank and the hot-water piping and faucets from that time on would be at full line potential and present a very dangerous shock hazard. This is because the tank and the piping "upstream" from the insulating coupling are "floating electrically," that is, ungrounded, and any electric potential set up in them will lie in wait for the person who may unwittingly come in contact with them, perhaps weeks or months after the electrical failure took place in the affected appliance.

This type of defect can occur not only from the stroke of lightning, if a stroke of lightning happens to have gone to ground through the piping system of a house, but also if the outer shell of the heating element in an electric water heater, for example, corrodes through, thus exposing the resistance wire to the water in the tank or permitting the wire to come in contact with the metal shell.

Electrical failure in the system is not common, but the danger attending to it is so great, it becomes important that electrical continuity be provided throughout the system, including the tank, through a jumper wire, No. 10 or larger, from the piping to tank, and tank to piping, around the insulating couplings or unions. Thus, the insulating piece serves to eliminate the galvanic cell within the system at the point where the piping and tank join, which is usually a critical spot from a corrosion standpoint, and change the concentrated corrosion at the joint to a more diffused and less damaging sort; yet the jumper wire provides the electrical continuity that is required for safety.

If a copper wire is connected as a jumper to a galvanized pipe which sweats or drips, or is damp, there will be corrosion at the point where the wire is connected to the pipe because of the formation of a galvanic cell at that point. The jumper must make good contact at all times; the mechanical and electrical soundness of the connection should be checked from time to time to insure electrical continuity.

There is no possibility of avoiding corrosion entirely, even if a system contains only one metal or alloy, because commercial metals are never entirely homogeneous and free from variabilities in composition, stress, and so forth.

It is worthy of note that it is sound practice to put a jumper wire around a water meter in the home so that if the meter should be removed for replacement or calibration, there will be a continuous grounding path for the leakage current that is present, a grounding path that is essential at all times where appliances used in the home are grounded, as is usually the case, to the cold-water line. Meter men have received severe shocks when taking out meters which had not been shunted by

proper wires. The flow of grounding current is a necessary part of the safeguarding of the people in the home, and it is vitally necessary therefore that no interruption of the flow to the ground be permitted. If it is permitted, there is a possibility that somebody will receive a severe shock by touching a water pipe, drain pipe, or a heating pipe, or any appliance grounded to them when his shoes are damp or wet and in contact with the earth, or, for example, the concrete floor of a basement or cellar.

Usefulness of magnesium anodes

In the home, a common method of reducing corrosion is to place a piece of magnesium—a so-called sacrificial magnesium anode—in the water tank. However, a magnesium anode is normally effective only for use in certain water supplies—those in which mineral content lies in the range of 120 to 250 parts per million of dissolved solids. Very pure soft water is almost a non-conductor of electricity, and the conductivity of such water is so low that there is no great need to provide protection against *galvanic* corrosion. The tank will corrode, however, with such water, and the corrosion rate, as indicated by the zinc, iron, and dissolved oxygen content of the water coming from the tank, will be very high although the usual signs of corrosion, tubercles and rust deposits on the tank wall, will be absent.

If the water has a high content of dissolved salts or other soluble material, its conductivity is likely to be high. In this circumstance, the flow of galvanic current will be excessive and the magnesium anode will be dissolved too quickly; its use then becomes economically impracticable because of the cost of continued replacement.

It is doubtful whether the anode is of much use in ordinary galvanized steel tanks because of the large area which must be protected. On the other hand, it is a valuable accessory in a vitreous-enameled or "glass-lined" steel tank because the amount of bare metal exposed in such a tank is small, and the anode can successfully inhibit corrosion in the 5 to 8 percent of the area of the metal tank that is exposed, if the water is hard. The condition with a vitreous-enameled tank gives a high current density that provides satisfactory protection, but at the same time, the life of the anode will be satisfactorily long because the tank surface area available as the other element of the galvanic couple—the cathode—is relatively small. This regulates the total amount of galvanic current flowing, and the cost of new anodes is likely to be small, in the range of \$1 to \$2 per year.

In some areas where the water is very hard (above 500 parts per million), conditions may be such that a film of carbonate is deposited along

the walls of the piping and water tank, which in effect protects the system from corrosive action so long as the film is continuous and thus does not allow galvanic cells to be set up. If the film of scale is not adherent over all the exposed surfaces, corrosion attack is concentrated at the bared areas and is fully as destructive as if no protective scale had been formed. Unfortunately, however, this film, or scale as it is commonly called, in due course fills up the pipe, particularly if it is carrying hot water, to an extent that the flow of water is reduced noticeably and eventually may be almost completely stopped. Another effect of the thick scale coating when water is being heated for

laundrying, dishwashing, and bathing is to reduce the efficiency of heat transfer to the extent that replacement of pipes or the heating coil becomes necessary.

The sad truth about corrosion of tanks and piping is that you cannot win. Rust and corrosion are going to be with you no matter what you do. With some kinds of water you can mitigate the problem to some extent. If you use materials that corrode to only a minimum extent, your original outlays for plumbing equipment and piping are going to be much higher than they would be for standard plumbing equipment.

Emendations to Consumer Bulletin

Studebaker Lark 6

Page 31, Col. 2, April '60 Bulletin

Under "Lark 6 Specifications," change Engine Type 6-in-line, overhead valves, to 6-in-line, L head.

Devices sold for draining flooded basements

Pages 30 and 31, July '60 Bulletin

The discussion of the *Speedy Drainer* (or *Drain-master*) aspirator-type water-pumping device should have included mention of a serious health hazard, and possible violation of local plumbing codes, inherent in the operation of any device of this type. Hooking up the *Speedy Drainer* for pumping requires that a hose from a water tap be run directly into the water to be pumped. This creates the possibility that, if there should be a negative pressure (i.e., less than atmospheric pressure, or suction) in the supply line at some time (as may happen on rare occasions due to failure of the city pumping system, breakage of mains, or other infrequent cause), some of the water intended to be pumped may be drawn back into the water supply piping, thereby contaminating the supply not only for the individual house but perhaps for others in the neighborhood. (Will the newspapers that print cellar drainer advertising please bring this disadvantage of water-powered cellar drainers to the attention of their advertising departments?)

Because of the possibility of back siphonage, as it is called, connections of the sort required by the *Speedy Drainer* are prohibited by the National Plumbing Code and many local codes.

Of course, as explained in our prior article, the *Speedy Drainer* will not work without a steady water supply at good pressure, and it is therefore very unlikely that anyone would hook up one of

these gadgets where there was inadequate supply pressure and backflow might be likely to occur. Nevertheless, even the remote possibility of this hazard to health makes it important to emphasize that any aspirator-type cellar drainer or washtub drainer, even if permitted by local regulations, should be used only where there is good, steady water supply pressure and one can be quite certain that no stoppage of flow or development of negative pressure will occur during the period of use. The pumping operation should be watched to see that it continues at all times, and that the supply pressure stays adequate; the hose connected to the water supply should be disconnected at once when the job is finished. Consumers' Research is grateful to The Kansas State Board of Health for calling the undesirable possibilities in use of the much-advertised water-powered cellar drainers to our attention.

Refrigerator-freezer combinations

Page 10, Table II, July '60 Bulletin

Kelvinator Foodarama K 89M—Change *Actual usable total volume* from 14.2 to 14.7 cubic feet; and actual capacity in cubic feet of refrigerator section from 9.4 to 9.9 cubic feet.

Refrigerator-freezer combinations—II

Page 12, Col. 1, Aug. '60 Bulletin

Kelvinator Foodarama K 89M—Change two sentences beginning on line 11 to read: "The actual usable volume of the refrigerator was found to be 9.9 cubic feet and the 6-cubic-foot freezer afforded only 4.8 cubic feet of usable space. The claimed total volume of the *Foodarama (K 89M)* was 3.3 cubic feet, or 22 percent larger than the box showed when measured in the laboratory."

Tips on flashlights

How to choose a bulb to give longer battery life and how to test the condition of the batteries

THE useful life of a set of flashlight batteries can often be considerably extended by the simple expedient of using a bulb which draws less current than the usual one. If your flashlight contains two or three size D cells (the commonest size, about 2¼ inches long and 1¼ inches in diameter) and employs the common type of prefocused flanged bulb (see Figure 1), you have a choice of two types of bulbs. In many hardware and variety stores you can get a bulb which is identical in size and shape to the bulbs supplied with most flashlights—but which draws only about 60 percent as much current from the battery. With this lower drain, the battery can be expected to last at least twice as long as with the heavier-current bulbs usually supplied with flashlights. (Ordinarily, only flashlights offered for "industrial" use will have the lower-current bulbs in them as sold.)

Flashlight bulbs are distinguished by the distinctive color of the ceramic "bead" in each bulb, below the filament. The table below gives the type numbers, bead colors, and various other characteristics of the prefocused bulbs available for flashlights that use 2 or 3 size D batteries. All of these bulbs will generally be sold at the same price. Westinghouse, for example, recommends a list price of 20 cents for each of them.

With brand-new dry cells, either of the higher-current bulbs (PR-2 or PR-3) will give a somewhat brighter beam than its lower-current counterpart (PR-6 or PR-7). However, in use, the higher drain will weaken the battery more quickly and soon the two bulbs will be equal in output; later if the batteries are not replaced by fresh ones, the lower-current bulb will give a brighter light. (See photograph, Figure 2.)

In a good many families, the total cost of supplying batteries for flashlights in the course of a year comes to a fairly substantial sum. There are many users, therefore, who would be glad to know of some method by which the frequency and costs of battery replacement could be diminished. This brief article explains how by a simple change of the kind of bulb used, the two cells of the usual flashlight can be made to give much longer service. The article also describes a simple, sure-fire method of ascertaining whether a battery is still in good condition and fit for further service, a matter of importance where one must depend on a flashlight for service in an emergency.

Since flashlight bulbs are short-lived, and subject to wide variation in life besides, and do not give warning of impending failure, it's a good idea to have a spare bulb for every flashlight (stored in the base of the light if the flashlight manufacturer has been thoughtful enough to provide a clip within the battery case for a spare bulb). Consumers' Research suggests that those who are willing to sacrifice some light intensity, especially when the batteries are new, for the sake of having less frequent need for battery changes should replace their PR-2 and PR-3 bulbs with PR-6's and PR-7's, respectively, and keep the original bulbs

Characteristics of certain prefocused flashlight bulbs

	Type No.	Bead color	Design volts	Design amperes	Rated average life (hours)
For use with 2 size D batteries	PR-2	blue	2.4	.50	15
	PR-6	brown	2.5	.30	30
For use with 3 size D batteries	PR-3	green	3.6	.50	15
	PR-7	pink	3.7	.30	30

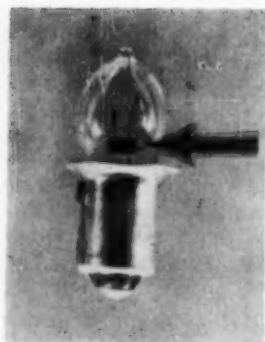


Figure 1—A flashlight bulb of the prefocused, miniature flanged type discussed in this article. Location of the identifying colored "bead" is shown by the arrow.

as spares for occasional brief use when needed.

* * *

Flashlight batteries, like other dry cells, have a tendency to "bounce back" to a degree if a rest period is allowed after they have been weakened by extended use. But a battery weakened by use or long storage will not give nearly as much service the second time around as it would when new.

To get a fairly good idea of the condition of a battery, you must test it under load. The load needed for a proper short-time test of a flashlight battery is greater than that provided by the flashlight bulb. Thus, simply turning on the light and observing whether or not it is bright is not an adequate test of the batteries, as there may be a fairly bright beam when the light is first turned on, even if the batteries are on their last legs or nearly so. Also, just trying the flashlight will not give any information about the condition of each of the 2 or 3 individual batteries in it.

Consumers' Research can recommend a con-



Figure 2—The photograph shows a PR-2 bulb, left, and a PR-6 bulb after a little over 3 hours of steady operation in identical flashlights, each started with fresh batteries. After several days' "rest," the experiment was repeated. The PR-2 was a little brighter at the start of the second run, but the condition shown in the picture, where the PR-2 is too dim to be of much use and the PR-6 remains usable, was reached in about 2 hours. In a third trial, several days later, the flashlight equipped with the PR-6 bulb had recovered a good part of its original brightness, but the light from the PR-2 bulb was too dim to be of much use.

venient method to check flashlight batteries of the C and D sizes. We use an automobile-type bulb, No. 1154 or 1158; these are bulbs widely used as combination taillights, stop lights, and turn-indicating lights on cars with 6-volt electrical systems. Our "battery tester" is simply one of these bulbs with a short wire connected to the outer shell of the bulb base and test prod on the wire's other end. The test prod is touched to the bottom of the battery and the two base contacts of the bulb are separately touched in turn to the top contact of the battery. (Be sure touching parts are clean and are firmly held together.)

A good, usable battery will cause a distinct red



Figure 3—Simple device used at Consumers' Research to give a quick indication of the condition of flashlight batteries. The arrow points to the thicker (lower resistance) filament of the test lamp.

glow in the center portion of each filament as the proper base contact for that filament is touched. A weak battery will not give any glow or only a faint one in the thicker of the two filaments, but will cause the thinner of the two filaments to glow a little. A "dead" or nearly dead battery, of course, will produce no visible effect at all or one hardly detectable, on the thinner filament. With a little experimentation, the user will learn to recognize the brightness and extent of the glow produced in the thicker filament by a good new battery and can then judge other batteries by comparison. (It will be convenient to mark the base contacts of the test bulb by a scratch or other indication to show which contact is attached to the thick and which to the thinner filament.) The recommended list price of the 1154 or 1158 bulb is 45 cents, and either can be bought at auto supply stores and service stations.

Electrical testing in the home

A study of devices and meters sold for the purpose

ALL READERS of CONSUMER BULLETIN will readily agree that Consumers' Research places much emphasis in its testing programs on the avoidance of any unnecessary shock hazards in the use of all kinds of electrical appliances, and our testing invariably includes checking each type of appliance for defects which might result in danger to the user.

While the number of people killed by electrical shock in the home in the course of a year is relatively small, indeed, almost infinitesimal in relation to the number of "exposures" to the possibility of shock, the danger always exists. There are very few who would wish to take any unnecessary chances in this respect in view of the fact that if one does receive a severe shock the chances are great that the shock will kill, or cause grave injury.

In our September 1958 BULLETIN, we discussed a leakage tester utilizing a transistor and a diode, which can be constructed by any mechanically-inclined householder or a mechanically skilled school boy, for about \$7. This inexpensive device is easily sensitive enough to indicate any leakage current that could possibly imply a danger to the user of an appliance. It has the distinctive value that it does not in itself present any hazard of shock to the user.

Unfortunately, a number of other devices sold for checking safety of an appliance do themselves introduce an element of risk of shock.

The *Safe-T-Probe* is a device for checking the presence of leakage current. (It does not indicate the strength of the current.) The *Safe-T-Probe* consists of a probe connected through neon bulbs and resistors to each side of an alternating-current line cord. In use, the device is plugged into an alternating-current outlet and the probe is touched to the metallic surface of the appliance or other point at which there is possible contact with the hands or fingers that might cause danger to the user. Since the probe is connected through the neon bulbs to each side of the alternating-current line, and one side of the alternating-current wiring is at ground potential, a path to the electrical ground in the home is afforded through the probe for any leakage current that may exist.

This device has several shortcomings. The first is that the *Safe-T-Probe*, itself, involves a shock hazard; a current leakage of 1.2 milliamperes was measured from the tip of the probe to the ground when the device was plugged in. While not dangerous, this amount of leakage on a portable appliance is well over the amount that Consumers'

Research would accept for an *A* or *B* rating and is definitely excessive. A second deficiency of the device is that the neon lamps used do not produce a glow until the voltage reached is about 55, and there is always the possibility of leakage current in hazardous amounts when the available potential is less than 55 volts. (Voltage available at a given point on an appliance is not necessarily that of the power line; intervening resistances may reduce the measurable voltage below 120.)

The *Plug-Rite* tester shown in Figure 1 works on a similar principle; however, it is not necessary to plug it into an alternating-current outlet for leakage testing. The ground path is formed by the person using the device. Current will travel from the button contact through the user's body to ground. The *Plug-Rite* is also intended for use in checking the polarity of alternating-current outlets, that is, determining which is the ground side of the receptacle. The device is held in the hand and the prong is inserted into each side of the alternating-current outlet, and the side which does not cause the neon bulb to glow is the grounded side. In CR's tests, the maximum current that would flow from the finger button on the *Plug-Rite* through a 1000-ohm resistance to a good ground was 0.45 milliampere, and it is likely that in most instances the current flowing through a person's body would be less than this owing to the higher resistance to ground of a person's shoes on the average floor in a home.

When used as a shock-hazard tester, the device exhibited the same faults as the *Safe-T-Probe*, that is, there must be a potential of about 55 volts to fire the bulb, and there is no way of determining whether the leakage current is very slight or great enough to be dangerous. However, if the bulb lights, better have the appliance checked.



Figure 1—Safe-T-Probe at the top, Plug-Rite below.

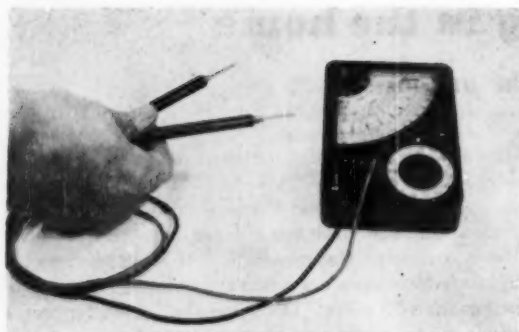


Figure 2—Lafayette TE-10 Multitester.

A good, low-priced "multitester"

There are other electrical quantities that need measuring or checking in the home from time to time. Such things as fuses, heating elements on appliances, etc., can be tested for continuity of circuit by means of an ohmmeter. Sometimes the level of the house voltage needs to be checked.

A satisfactory type of electrical testing device for home use is commonly known as a multitester, and very recently an instrument of this kind has been made available at an astonishingly low price. It is marketed by an electronics supply dealer. The particular one tested is illustrated in Figure 2, and is known as the *Lafayette TE-10 Multitester*. This versatile, nicely-constructed instrument covers many ranges of volts, ohms (resistance or continuity), and direct-current milliamperes, more than sufficient for around-the-house use. It is small and light. It was found to be reasonably accurate, for most uses, in the readings obtained. CR recommends this inexpensive meter for general use around the house, and considers it a handy auxiliary for radio and TV repairmen.

The *TE-10* can be used as a leakage measuring device by a very simple expedient. Connect a 10-watt 1000-ohm resistor between the appliance being tested and a good ground, and measure the alternating-current voltage drop across this resistor. The voltage indicated will then correspond numerically to the leakage current in milliamperes. Always set the meter at the start of the experiment to the 120-volt scale (use the 300-volt scale for 240-volt appliances) and work down by trial to the scale at which a voltage can be conveniently read. To facilitate the test, the resistor leads can be wrapped around the plug tips of the test leads before they are plugged into the meter. (Caution is needed to avoid the possibility of a short circuit at this point.) One test lead is then touched to a water pipe or other good ground and the other is used to touch an exposed metallic part of the appliance being checked.

Another instrument sold for use around the home is the *Superior Model 70 Utility Tester*. CR has tested this instrument from time to time for the past several years. When a new model appeared recently, it was purchased and checked to see if the hazard present on the previous models was still present. The experiments quickly showed that it was. Even though the design of the meter face has been modernized, the circuit remains the same and the shock hazard, when the device was used as a continuity or leakage detector, was still present. Unlike the *Lafayette TE-10* which used a dry battery, the *Superior Model 70* utilized energy from the 115-volt alternating-current power line for the continuity check. And like the *Safe-T-Probe*, it used the alternating-current line for the leakage test. Without these hazardous features, the *Superior* tester would be a useful device for the homeowner. The *Superior Model 70* could be made safe by the use of a self-contained battery, and CR wonders why the manufacturer hasn't taken steps to eliminate the shock hazard inherent in a device that he advertises as useful for the purpose of checking on the shock hazard of appliances.

A. Recommended

Lafayette Multitester, Model TE-10 (Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N. Y.) \$9.95, including battery and test leads, plus postage. Made in Japan.

10,000 ohms per volt a-c and d-c multimeter. Measuring scales available: d-c volts, 0 to 1200 in 5 ranges; a-c volts, 0 to 1200 in 5 ranges; d-c current, 0 to 300 ma. in 3 ranges; resistance, 0 to 3 megohms in 2 ranges. There are also scales that can be used for measuring decibels and checking the value of a capacitor (condenser). Weight, 12 oz. Dimensions: 1 x 3¼ x 4½ inches.

B. Intermediate

Plug-Rite (Plug-Rite Inc., 35 N. Vandeventer, St. Louis 8) \$1.

A useful device for determining which is the line or hot

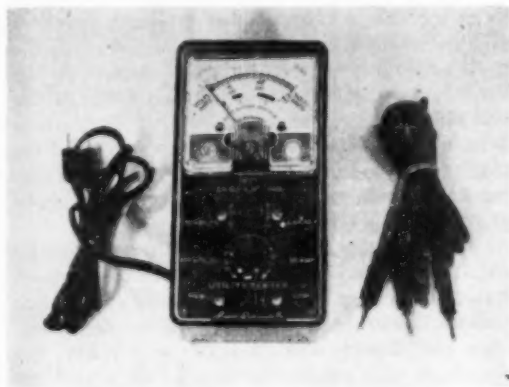


Figure 3—Superior Model 70 Utility Tester.

side of a 120-volt a-c outlet, but not considered suitable for determination of shock hazard owing to lack of any indication of the amount of leakage current present. Weight, 2 oz.

C. Not Recommended

Safe-T-Probe (K-G Electronics, 2738 N. Sheffield Ave., Chicago 14) \$2.49.

A leakage testing device which had itself an excessive and undesirable amount of leakage current (1.2 ma.). Weight, 5 oz.

Star No-Leak Universal Tester (Sears-Roebuck's Cat. No. 34-5068) \$1.98, plus postage.

A testing device similar in principle to the *Safe-T-Probe*. Construction of the device was judged poor for a

device meant to be plugged into a 120-volt outlet receptacle. Weight, 3 oz.

Superior Electric Utility Tester, Model 70 (Distributed by Moss Electronic, Inc., 3849 Tenth Ave., New York 34) \$15.85, postpaid.

Reads resistance (0-1000 ohms), a-c and d-c volts (0-300 volts) and amperes (0-15 amp.), and indicates presence of electrical leakage. Use of this instrument presented a high degree of shock hazard when it was being employed for the determination of electrical leakage current. If it so happened that the line plug was inserted in such a way that the "hot" side of the line was connected to the ungrounded probe, there would be a full 110-volt line potential at the test probe.

A Belgian magazine and a state food inspector comment on food ingredients and labeling

A DISCUSSION of a matter of considerable importance to American consumers appeared recently in a Belgian publication, *Union Feminine pour l'Information et la Defense des Consommateurs*. We are glad to present an abbreviated translation of this article for the benefit of readers of CONSUMER BULLETIN:

As consumers improve their income, they become more difficult to please with respect to the appeal or desirability of goods, the color and flavor of foods. Psychological weaknesses of consumers are often exploited by unscrupulous manufacturers. . . .

Bottled lemonade is an example. This is considered unattractive unless it is processed to give the illusion of fresh fruit juice. In many cases the manufacturer provides an artificial turbidity by the use of added chemical substances. . . known as "anti-settling-agents." "Orangeade," too, is given an artificial and deeper color which consumers happen to prefer.

Some consumers demand that yogurt should have a minimum of sourness in its taste, forgetting that acidity is a natural characteristic of yogurt. Thus there are "sweet yogurts," completely different bacteriologically from true yogurt, and more properly called "fermented milk" rather than yogurt.

Housewives object when they find that mayonnaise that they have bought is rancid, ignoring the fact that mayonnaise which stays fresh has been chemically treated with "antioxidants" to extend its life. . . .

Europeans often forget that the nutritional values go down in the interval between the day vegetables were harvested from the truck garden and the time when the consumer purchased them in the market—where they may appear to be fresh while not fresh in actuality.

It is absolutely necessary that the consumer

should read labels and understand them. At this point consumer education has a part to play, education which permits the consumer to use his own judgment and prevents his making serious mistakes in buying his foodstuffs. Only when the consumer is educated to read and understand labels will industry treat him as an informed and enlightened buyer. (A delegate attending a world session on labeling once commented: "The average consumer is not capable of understanding the significance of the declaration of food ingredients.")

* * *

John G. McClellan, administrative supervisor, Food Inspection, Wisconsin Department of Agriculture, said in a meeting of health, food, drug, and feed officials: "I like to think that the days of food ignorance are rapidly passing. I even heard a rumor to the effect that a woman shopper in Madison was caught the other day reading the label on a food package. I was greatly surprised first of all that there actually was a label on the package and, second, because I've always thought that nobody reads labels but the food inspector. (She very obviously had lost her mind and figured she could qualify as a food inspector.)"

Mr. McClellan wisely observed *that the economic and physical well-being of every citizen of our nation is inseparably tied up with commercially processed food.*

Readers interested in the problem of labeling, especially teachers of food selection in courses in home economics in schools and colleges, will be interested in the reprint available at 10 cents from Consumers' Research, "Those Labels on Packaged Foods," which discusses the numerous ways in which food manufacturers have found it possible to make lists of ingredients on packaged foods difficult, or in some cases, almost impossible to read and understand.

Photographic bargains may be costly

BY W. A. PERINE

The following article is reprinted by permission from the PSA Journal, the official publication of the Photographic Society of America (published at 28 Leonard St., Stamford, Conn.), 2005 Walnut St., Philadelphia 3. The article appeared in the May 1960 issue of the PSA Journal.

UNDOUBTEDLY a large number of PSAers and their photographic friends have traded with discount houses that advertise in the national photographic magazines and have received fair treatment from these mail order firms. But this is not always the case, as in two recent incidents involving Seattle photographers that have come to my attention. These involve misleading advertising and unethical retention of money after request has been made for its return.

This is the way it might happen to you:

You see an advertisement in a national photographic magazine for a camera at a price below that of local firms. You write them, and they offer you a high trade-in on your old camera. You send your old camera and money and if they have the new camera in stock, you get a bargain.

Next, you write them about trading in an old lens for a new one for your 35mm or 4 x 5 camera. Again, they offer you a bargain and a high trade-in with immediate delivery upon receipt of your money and equipment.

You send it. Nothing happens!

A month to two months later, you get a letter from the discount house. They are sorry but they are out of stock on the lens you ordered—but they have another lens which you can have for your lens and your money (which they already have) and another \$50 or \$100. The price in this new offer may be far above the best you could do locally, but they have your money and equipment.

If you want your lens and cash back, you will get it—if you are willing to wage a desperate battle for many months, by mail, with this type of discount house. If you are not up to this, you pay them their exorbitant price for the other lens and then try to trade it for the lens you want at a local store or use it if you can.

Here is what you can do to avoid this situation and protect yourself and your money when you deal with a discount house which has its store a long way from your town.

First, get in writing that they have the merchandise you want in stock and can ship it immediately—and save their letter, or have a copy

We are glad to note that the Federal Trade Commission has entered upon a course of action that will at least help a little to clean up the situation discussed by Mr. Perine in the accompanying article. The Commission has proceeded against at least one New York camera store doing a large mail-order business because of its practice of offering cameras which it did not have in stock in sufficient quantities, because it held customers' remittances and failed to make prompt refunds, because it used coercive tactics to force acceptance of substitute merchandise, and practiced other highly misleading methods of selling.

The Federal Trade Commission is also active now in procedures intended to discourage the sales technique, very common in the photographic trade, of relating allegedly low bargain sales prices to falsely misrepresented high "regular" or usual prices for the cameras, projectors, and other equipment. The consumer assumes he is getting a great bargain in buying a camera at \$35.95 that (allegedly) is regularly sold at \$89.95 or some other fictitious figure.

If a store treats you unfairly in any of these ways, report your difficulties to the National Better Business Bureau, Chrysler Building, New York 17, New York, or the Federal Trade Commission, Pennsylvania Ave. at 6th N.W., Washington 25, D.C. (a copy of your letter if you wish to Consumers' Research, Washington, New Jersey).

made (photographic process if possible) if it is the kind you return with your answer.

Second, don't send the full amount of cash required! Have them send it C.O.D. and send only 10% of the price. This will make your loss smaller during the months they may keep your money. The C.O.D. charges are well worth paying.

Third, the moment they start stalling on returning your money after you ask for it, notify the Better Business Bureau, the postal inspec-

tor and the prosecuting attorney of the facts. Then write the camera magazines they advertise in. The magazines can't police their advertisers, but if enough people complain, they may drop this advertising from their magazines until the situation is cleared up.

Last, but not least, buy from your local camera store whenever possible. If you trade with your local firms and stick to one of them, they will undoubtedly give you better trade-in values and in many cases discounts on "specials" that compare favorably with the mail-order discount houses.

Remember, your local firms back your local and national photographic events and organizations, from the camera club on up to the international salon! They deserve your support and are real handy. You can see the camera you're thinking of buying and take it with you when you buy it. If you don't want to pay cash for it, you can charge it, and you can bring it right back if it doesn't prove to be what you wanted or expected.

At the kind of discount houses I'm complaining about they use your money for a month or more before you even get your equipment from them. . . if you get it. If you don't, they may keep your money (and they don't even pay bank interest on it) for six months or longer and only return it when forced to do so.

In the Seattle incidents I mentioned earlier a government employee sent about \$145 to a discount house in New York last spring for a camera. The price was low and the firm promised the

camera by return mail. In June, 1959, she received a letter saying the camera was out of stock. She had expected to use it during the summer, so she sent an air mail-special delivery letter asking for her money back.

She sent more letters in July and August with no reply from the firm. She wrote the camera magazine that had advertised the firm's goods but they were unable to help her. She got the Seattle prosecuting attorney's office to write the firm. By this time it was September 1959. She next asked the U.S. Postal Inspector in New York City to investigate the matter, and several of her friends started writing the firm indignant letters. She finally did get her money back. The other incident involved a man who sent \$134 and equipment for two lenses which had been advertised in the national photographic magazines, and which the discount house assured him they had in stock and would ship by return mail on receipt of his money and equipment. They got his money and equipment in 1959, and as the first of April 1960 approaches (when this is being written) he has just finished writing the Postal Inspector in New York City, after contacting the Better Business Bureau and the photo magazines. Next, he is going to the prosecuting attorney for help in getting his money back.

In the meantime, the firm goes on advertising the very same lenses, doesn't answer his letters, and keeps his money. Be wise in your buying—bargains may be costly.

Are you planning to buy or build a house?

(The beginning of this article is on page 6)

An FHA (Federal Housing Administration) "approved" house is one that has been accepted as conforming to FHA minimum property requirements. It does not by any means imply strongest, best designed, or top quality. FHA standards are a step in the right direction, but for a well built house, you will wish to go beyond FHA's minimum requirements.

Anyone interested in this subject and wishing additional and more detailed information on design, appearance, location and neighborhood, structure of a new house, as well as tips on buying a used house will be well advised to visit a sizeable public library and get some of the numerous books and magazines which deal with building and buying of houses from the architectural, construction, and equipment standpoints.

For those, however, who do not care to go into too much detail, CR recommends a small booklet entitled "How To Judge a House before you

build or buy," by A. M. Watkins, available at \$1 from the publisher, All About Houses, Inc., 25 Ritie St., Piermont, N.Y. Material in this book is effectively presented and is readable and informative; its information will be very useful for persons who have a limited knowledge of house construction and details. We believe anyone contemplating building or buying a house will find the booklet worth many times its \$1 price.

Those who prefer more detailed information on specific subjects, such as septic-tank systems, insulation, flooring materials, heating the home, and numerous others will find the University of Illinois circulars most helpful. The set of 30 non-technical circulars on various phases of home planning and construction is available for \$4. Individual circulars are 15 cents. Requests should be addressed to Small Homes Council, Mumford House, University of Illinois, Urbana, Ill.

Informed salesmen vs. order takers

THE U.S. consumer has money to spend, but he isn't buying the way some people think he should to keep the wheels of production turning rapidly. And do you know why? It seems that he (or she) isn't pleased with the kind of service he is getting. That was the conclusion of a special report by Printers' Ink, trade journal in the field of advertising and marketing, on the basis of a national survey of retail selling in stores and showrooms from coast to coast. As the magazine put it, "Poor salesmanship is one of the major economic problems facing the U.S. today."

Consumers' complaints were that sales people were poorly informed about their merchandise; they were often discourteous, in some cases rude; they let customers wait while they kept on chatting with their co-workers. One of the most annoying experiences was that of trying to buy items that had been advertised by department stores, but which no one knew the location of, or at any rate the first two or three clerks queried could not tell where the merchandise was located.

From automobile dealers, fussy customers received little or no attention. One well-to-do physician when asked why he was driving a six-year-old car explained that he just couldn't face the problem of buying a new automobile because of the numerous little things that would have to be fixed before the car would be in satisfactory running condition. Each trip to the dealer to get some fault corrected meant a fight to get the service due on a new car warranty, and he preferred to let well enough alone. Other customers reported that auto dealers were given to postponing repairs until after the warranty period had run out. There were also complaints of shoddy service, charges for parts not used, grease jobs not done, and exorbitant rates for labor.

The survey takers who "test-shopped" the appliance stores turned in somewhat better reports. Local independent merchants were cited as better salesmen than chain store employees. Whether this meant that they really knew enough about the operation of the particular appliances they were selling to be of real assistance to prospective customers was not clear. At any rate the independents were interested in explaining the different features and performance of the appliances they carried.

A decided trend toward self service in many sections was reported in spite of the fact that self-service arrangements were sometimes con-

fusing to the uninformed shopper, according to the Printers' Ink report. In a downtown hardware store in Chicago, for example, a woman shopper asked for help in finding two or three items and the clerk suggested that she make a trip across the city to their other store, which had salesmen.

The "soft sell" which does not seek to part the consumer forcibly from his money was a matter of policy in some organizations. Stephen Masters of Masters, Inc., one of the pioneer discount stores, took the position that he did not want salesmen, but only educated order takers. It was his view that since his customers are pre-sold by national advertising, his clerks should be trained to be courteous, answer questions, help the customer find the merchandise, but not "waste time selling him anything."

Perhaps the very lack of the aggressive salesmanship that Printers' Ink seems to think is necessary to move the stocks in bulging warehouses appeals to consumers. The absence of "hard selling" may account for the tremendous popularity of the big discount houses with their large parking lots, open seven days of the week in some sections, with huge stocks of a wide variety of merchandise.

The polite order taker, however, is no substitute for the trained, informed salesman who knows the workings of a new automatic washer or dryer, and the advantages and disadvantages of a new type or model camera. The concept of the salesman as a purveyor of patent medicine, of something that the buyer doesn't want, won't use for long after he has paid a high price for it, and which wouldn't do him any good anyway, has been too firmly fixed on the national consciousness by sensational novels and popular movies and plays. The slick talker and the "suede shoe" boys continue to ply their trade, as the Better Business Bureaus have occasion to point out, but in these days of highly complex mechanical and technical devices there is a real need for the informed salesman who knows his product and what can reasonably be expected of it, who will see that his customer gets a product typical of the best off the assembly line, not a lemon, and who will make certain of proper installation and informed operation of the product in use. That kind of sales service should be rewarded by consumers wherever they find it, and it is not to be had at discount-store prices, either.

As the Printers' Ink survey pointed out, manufacturers are beginning to send out more how-to-use-it information about their products. Some stores are holding training clinics to inform their personnel about products and stocks. Salesmen are often sent out to test-shop competitive stores to see how their salesmen perform. The informed consumer can help management improve service by reporting, preferably by letter, whenever he is badly or rudely served. If the management of a particular store shows lack of interest, write the home office of the manufacturer of the product.

Many manufacturers, particularly those with able marketing advisers, are beginning to realize that it is not enough to turn out a good product. The entire chain of distribution from factory to

distributor to dealer to consumer needs to be smoothly coordinated and intelligently administered, for the consumer will rightly or wrongly hold against the brand name of the product failure to render good service at any point in the chain. Salesmen—and servicemen—are as essential in building good will for a product as its performance in the user's home.

Consumers' Research can provide information about the quality of a product, but consumers are on their own when it comes to the personal service they find in shops and stores. Their complaints and unhappy experiences, often aired in the pages of CONSUMER BULLETIN, have been effective in persuading enlightened manufacturers to clean up some bad service and distribution situations in particular fields.

Brief index of Consumer Bulletins, January through August 1960

	Month	Page
Adhesive, for jewelry repair*	Mar.	14
stick-on mounting putty*	May	27
Advertising, emphasis on styling*	July	32
misleading	Jan. 32*, Mar. 3, Aug. 4, 26	
Air conditioners, room*	June	2
Amplifiers, stereo*	Mar.	20
Antennas, "plug-in" TV*	Jan.	2
Anti-freeze, re-use, controversy	May	15
Appliances, annual model changes	Mar.	39
care in use	Mar. 4, Apr. 3, June 32*	
gas, staging a comeback	Aug.	37
replacement under guarantee	Aug.	4
Automobiles, 1960, annual report*	May	16
Rambler American*	Jan.	21
Valiant V-200*	Feb.	39
Mercury, Oldsmobile 88,		
Pontiac*	Mar.	10
Chevrolet, Ford, Plymouth,		
Studebaker Lark*	Apr.	26
Rambler Super 6, Rambler		
Rebel V-8, Dart, Buick*	June	21
Comet, Falcon (with 3.56 to 1		
rear axle ratio)*	July	12
compact cars	May 16*, July 3, Aug. 4	
foreign cars, buying abroad	Mar.	28
Hillman, Simca, Volkswagen,		
Volvo, Fiat, Morris, Triumph*	Feb.	6
Ford Anglia*	Apr.	20
Mercedes-Benz 190*	Aug.	9
station wagons*	June	12
model changes, annual	Mar.	39
reflective tape on rear bumper	Aug.	3
"speed control," an inexpensive	Aug.	39
Basements, dampness in	Mar.	28
devices for draining*	July	30
Battery additive, claims	June	37
Beverage concentrates	Jan. 30*, Mar.	38
Binoculars from Japan	Mar.	26
Birds, control of pest*	Aug.	2
Bulbs, lamp*	Aug.	26
Bulletin subscribers, change of address	Aug.	25
special inquiries, remittance	Aug.	19
Camera-projector, movie*	Mar.	31
Cameras, 35 mm., range-finder*	June	14
single-lens reflex*	Jan. 12, Feb.	14
telephoto lenses*	Feb.	18
Can opener, electric*	May	6
Cleaner for chrome*	May	15
Cleaners, Am. Hotel Assn. standards	Apr.	32
Clocks, electric*	Aug.	20

	Month	Page
Clothing, "low price," etc., meanings	Aug.	3
Coffee grinder, electric, inexpensive*	Apr.	39
Coffee makers, electric*	Jan.	39
Contact lenses, reader's experience	Jan.	22
Credit buying, high interest rates*	Aug.	31
Dehumidifiers, electric	Aug.	3
Detergents, laundry*	Jan.	25
use in hard and soft water	Aug.	37
Dinnerware*	June	39
Dishwashers, portable*	Mar. 6, Aug.	17
Drugs, changes in ingredients*	July	28
Dryer, clothes, electric*	Apr.	11
Fabric color spray	July	38
Fasteners, hooks, bolts*	Aug.	23
Flammable materials, reference book*	Aug.	30
Flash units, portable electronic*	July	21
Foods, additives	Jan. 20, Feb. 17, 19*, Mar. 4,	
Apr. 18*, May 38*, June 10*, July 2*		
canned, artificially sweetened*	Apr.	18
consumption by average American	Aug.	3
frozen, handling in		
transit	Jan. 4, Feb. 3, June 3	
refrigerator-freezer storage	July 6	
handling in summertime	Aug. 38	
labeling*	Feb. 19, Apr. 18, July 2	
orange juice, standards	July 37, Aug. 38	
peanut butter, old-fashioned	Jan. 37	
poisons in food	Jan. 20, Mar. 4,	
May 12*, 38, June 10*, July 2*		
"steak," manufactured	Aug. 37	
Garage door operators*	Apr.	13
Garden hose*	July	29
Heater, immersion water*	Feb.	2
Hedge trimmers*	July	15
High fidelity, amplifiers, stereo*	Mar.	20
new developments*	Jan.	23
record players, stereo*	Apr.	2
Home improvements, "bait" advertising	Aug. 4	
Hosiery, women's, buying	May 33	
Installment buying, high interest rates*	Aug. 31	
Irons, steam*	Jan.	16
Lamp bulbs*	Aug.	26
Lawyer rate	Aug. 4	
Markers, felt-pen*	Mar.	17
Merchandise, bargains from abroad*	July 18	
book on bartering	Aug. 4	
Milk, overuse*	Mar.	2
Mixers, portable electric*	June	18
Motion pictures*	each issue	
Mowers, power, care	May 3	

	Month	Page
Outboard motors*	June 25, July	39
Paint sprayer, rotary*	Apr.	25
Projectors, home movie, 8 mm.*	Mar.	29
slide*	Aug.	6
Pumps for draining basements*	July	30
Radio, clock*	Feb.	20
portable transistor*	Jan.	6
table model*	Feb.	20
Radioactivity, in air, water, food	Aug. 10, 38	
nuclear tests, fallout, problem*	July	25
Record players, stereo*	Apr.	2
Records, phonograph*	each issue	
"Reducing" device, misleading claims	Aug. 4	
Refrigerator-freezer combinations,		
electric*	July 6, Aug.	11
Roofs, white coating for built-up*	June 33	
Rugs and carpets, care*	May 28	
reduce falls on slippery floors	Aug. 3	
selection*	Apr.	6
Screen materials, window*	May 2	
Shingles, asphalt, replacement*	Aug.	8
Shirts, men's white*	Jan.	9
Shoe dressings, white*	May 10	
Spot and stain removal*	Mar.	16
Stereo sound equipment, see High fidelity		
Stool, step, low*	May 39	
Sunburn, dangers	Apr. 38	
Sunlamps*	Jan.	27
Suntan, solutions for synthetic	May 4, Aug. 3	
Telescope, achromatic*	Aug.	29
Television, antennas, "plug-in"*	Jan.	2
Textiles, American Standard, new*	May 35	
foreign competition	July 37	
labeling act, new*	Mar.	9
Tooth paste with hexachlorophene	Aug. 38	
Towels, "unwoven"*	Aug. 26	
Viewer for 8 mm. movies	Mar. 31	
Washer-dryer combination*	Apr.	15
Washing machine, automatic*	Apr.	11
Watch bands, tight	July 27	
Watch repairs, with notes on		
buying a watch*	Aug. 18	
Water purifying devices	Aug. 27	
Water softening equipment*	Feb.	23
Zipper, new type	July 4	

Entries marked () are longer or more comprehensive items.

NOTE: Reprints from previous Consumer Bulletins are listed on p. 11 of the June '60 issue.

Phonograph Records

BY WALTER F. GRUENINGER

Please Note: Stereo records are indicated by the symbol Ⓢ. Ratings (AA, A, B, etc.) apply first to the quality of interpretation, second to the fidelity of the recording. Most performances are available on both stereo and regular LP records.

Ⓢ **Beethoven: Sonata No. 3 & Brahms: Sonata No. 2.** Gendron and Entremont (cello and piano). Columbia MS 6135. \$5.98. Staples in the field, but the performance leaves much to be desired. There's technical brilliance, but others have shown far more depth of understanding. You'll find the latter in the highly recommended new Deutsche Grammophon 138082 SLPM recording of two Beethoven cello and piano sonatas played by Fournier and Gulda. The Gendron and Entremont sound is acceptable. **B AA**

Ⓢ **Beethoven: Wellington's Victory & Grofé: Grand Canyon Suite.** Morton Gould and His Orchestra. RCA Victor LSC 2433. \$2.98. Spectacular sound that helps show off your stereo rig. In the curious, rarely heard Beethoven opus, the battle of the French and the British occurs between the speakers, larger than life. It's in the same genre as the 1812 Overture. There's a rousing performance of the Grofé piece on this disk, too. **AA AA**

Ⓢ **Brahms: Piano Quartet No. 1 in G Minor (Op. 25).** Berkowitz and the Bel Arte Trio. Boston BST 1015. \$5.95. An early work of this master but a noble one. Technically accomplished, romantic, delectable interpretation, with a particularly sensitive projection of the lyric sections. The recording can hardly be bettered in the present state of the art. The mono recording lacks the spaciousness of the stereo, but in other respects it, too, is excellent. **AA AA**

Ⓢ **Handel: Acis and Galatea.** Sutherland, Pears, Branigan, Galliver, etc., under Boult. L'Oiseau Lyre SOL 60011/2. \$11.96. A masque for the stage, first performed about 1718, which became the most popular of Handel's works while he lived. It has not held this exalted position in our time but it is an entertaining work, full of lovely melodies. For the most part, they are sung with distinction by Sutherland, particularly, and Pears nearly always. Good tone in these disks. **A AA**

Ⓢ **Schumann: Concerto in A Minor.** Van Cliburn (piano) with the Chicago Symphony under Reiner. RCA Victor LSC 2455. \$5.98. A great romantic concerto performed with sparkle, technical adroitness—but no heart. Van Cliburn has done better with Rachmaninoff and Tchaikovsky. For outstanding playing of the Schumann piano part turn to Serkin, Rubinstein, Novae. Reiner and his men play the orchestral part impressively. Round, full recording with the centered piano bathed in sound. **A AA**

Ⓢ **Wagner: Tristan and Isolde: Prelude and Liebestod and Tannhäuser: Overture and Venusberg Music and Lohengrin: Prelude to Act III.** London Symphony under Dorati. Mercury SR 90234. \$5.98. Marvelous. Overseas, Dorati continues to direct better sounding disks than he ever gave us here. The warmth of the recording as well as the playing in this popular Wagnerian repertoire makes this a must for all Wagnerians. But I wish the concert ending had been added to the Lohengrin ACT III Prelude. **AA AA**

Ⓢ **Weber: Overtures.** Concertgebouw Orchestra under Dorati. Epic BC 1078. \$5.98. It's been a great season for Weber overtures, but no disk heretofore issued tops this one. In all their beauty you hear four famous Weber overtures, plus the Schubert "Overture in C Major." Excellent recorded sound. **AA AA**

Ⓢ **Wolf: Italienisches Liederbuch.** Irmgard Seefried and Fischer-Dieskau (singers). 4 sides, Deutsche Grammophon 138035/6. \$13.96. Caviar for the general. This new arrangement of the 46 songs which the two singers adopted for performances gives us for the most part alternating solos. These lieder are expressively performed by both singers, who are ably aided by pianists Erik Werba and Georg Demus—one at a time. But F-D does the better singing job. The stereo recording gives wide separation, with the piano coming most of the time from

the left speaker and the voice from just to left of the right speaker. Too much spread. Unfortunately, no translations are provided. **A A**

Ⓢ **A Bouquet of Tartini and Nardini Concerti.** Jan Tomasow (violin) with the Chamber Orchestra of the Vienna State Opera. Vanguard BGS 5027. \$5.95. Rich, charming music for the most part. Tomasow has never sounded better. His musicianship has always impressed, and now his tone has taken on a new glow. Well reproduced. **AA AA**

Ⓢ **Birth of the Baroque.** Consort of Viols of the Prague Pro Arte Antiqua. Bach Guild BGS 5019. \$5.95. Restful, charming original compositions and transcriptions for viol ensemble. Included are brief works by Gabrieli, Lully, Biber, Gibbons, and others. Played by a group which understands the style and plays expressively. Clearly recorded. **AA AA**

Ⓢ **Everything but the Beer.** Boston Pops Orchestra under Fiedler. 4 sides, RCA Victor LSC 6082. \$11.96. The Pops repertoire shows long hairs and short hairs the attractions of each others' music. As the Pops enters its 75th season, Victor brings out these disks plus two beer steins for the price of the disks alone. Fortunately, the disks don't give you EVERYTHING you hear on the main floor such as the late comers tramping down the aisle, the pop of champagne corks, the loud conversation of neighbors, the too early applause. What Victor offers here are such delectable numbers as "Danse Macabre," "Hungarian Fantasy for Piano and Orchestra," "Strauss Waltzes," "Drink to Me Only With Thine Eyes," "Roumanian Rhapsody No. 1." Played with gusto, but with too little nuance? Very likely. But if Fiedler attempted subtlety at the Pops, too few could hear it. He plays loud and broad, setting the Pops style. Unfortunately, there's more reverberation in this recording than you hear at a Pops Concert. It tends to cloud details. **AA A**

Gisele MacKenzie Sings Lullaby and Good Night (vocalist). Cricket Record CR 29. \$1.98. This popular television personality softly sings "Rock-a-bye Baby," "Italian Lullaby," "Russian Lullaby," "Evening Prayer," "Sweet and Low," and other sandman songs. There's a whisper of a flute now and then, and the ping of a guitar. All done subtly—but Miss MacKenzie detracts somewhat by ragging a few of the numbers. Fine recording. **A AA**

Ⓢ **LeRoy Anderson Conducts His Music (Unnamed Orchestra).** Decca DL 8954. \$3.98. Included are such favorites as "The Syncopated Clock," "A Trumpeter's Lullaby," "China Doll," "Fiddle-Fiddle." Played more leisurely than often heard. Dreamy sound that would benefit by a dash of brilliance. **AA A**

Mantovani Songs to Remember (Orchestra). London LL 3149. \$3.98. Suave, soothing orchestral performances featuring strings; "Far Away Places," "Jamaica Farewell," "Tenderly," "Tonight," and similar tunes very well recorded. **AA AA**

Ⓢ **Rodgers and Hammerstein Songbook.** Richard Kiley (baritone). 4 sides, RCA Camden CBS 102. \$5.98. The buy of the month! A collection of 24 R & H songs including such hits as "Oh, What a Beautiful Mornin'," "No Other Love," "Younger Than Springtime," "Some Enchanted Evening." Richard Kiley has a rich voice and a straightforward style. Barring a flat note or two, by current standards his is a rare musical show talent. Unobtrusive orchestral background and superb recording. **AA AA**

Ⓢ **Songs of the Sabras.** Karmon Israeli Folk Dancers and Singers. Vanguard VSD 2059. \$5.95. The group has sung on Ed Sullivan's TV show, in Radio City Music Hall, and on many tour spots. This is "the new folk music." Gay numbers alternate with sad ones—20 in all. Excellent performance and recording. **AA AA**

Ratings of Current Motion Pictures

THIS SECTION aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 17 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Boxoffice, Cue, Daily News (N. Y.), The Exhibitor, Films in Review, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings by the Protestant Motion Picture Council, The Tablet, Time, Variety (weekly).

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Anasco, Eastman, Technicolor, Trucolor, Warner Color, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
sci—science fiction
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wst—western

A	B	C	
2	4	4	Adventures of Huckleberry Finn...dr-c AY
—	2	1	All the Fine Young Cannibals...dr-c A
—	2	1	All the Young Men...war-dr AY
—	2	2	Amazing Mr. Teas, The (British)...com-c A
—	2	2	Angel Wore Red, The...dr A
—	3	1	Angry Silence, The (British)...soc-dr A
1	7	4	Apartment, The...com A
—	3	—	As the Sea Rages (German)...dr-c AY
—	3	3	Battle in Outer Space (Japanese)...sci-c AY
—	1	4	Battle of Blood Island...war-mel AY
—	12	2	Battle of the Sexes, The (British)...com A
—	6	3	Because They're Young...nov AY
—	2	4	Bell Boy, The...com AY
2	8	3	Bells Are Ringing...mus-com-c AY
—	2	2	Big Chief, The (French)...com AY
1	2	—	Big Jeeter (Italian)...dr AY
—	2	3	Blitzkrieg (German)...war-doc A
—	4	3	Boy and the Pirates, The...adv-c AY
—	4	2	Breakout (British)...war-dr AY
—	6	—	Brides of Dracula, The (British)...mel-c AY
—	3	—	Bridge, The (German)...dr A
—	2	2	Butterfield 8...nov-c A
—	2	2	Cage of Evil...cri-mel AY
1	3	—	Captain's Table, The (British)...com-c A
—	—	3	Career Girl...dr-c A
—	3	—	Carry On, Constable (British)...com AY
1	3	1	Carry On, Nurse (British)...com AY
—	6	2	Chance Meeting (British)...cri-mel-c A
—	3	—	Chartreuse Caboose...com-c AY
—	2	5	Chasers, The (French)...dr A
—	2	1	Cinderella...mus-fan-c AY
—	4	4	Circus of Horrors (British)...mel-c AY
—	1	2	College Confidential...dr A
—	7	2	Come Back, Africa...doc-dr AY
4	7	2	Conspiracy of Hearts (British)...war-dr AY
—	3	4	Cossacks, The (Italian)...hist-dr-c AY
—	—	3	Counterplot...mys-mel AY
—	3	—	Cover Girl Killer! (British)...cri-mel AY
—	5	8	Crack in the Mirror...dr A
—	1	3	Crazy for Love (French)...dr A
—	2	1	Crowded Sky, The...dr-c A
—	—	3	Dangerous Age, A...mel A

A	B	C	
—	1	2	Day They Robbed the Bank of England, The (British)...mys-mel AY
—	5	—	Dinosaurs (British)...sci-c AY
—	5	2	Dreams (Swedish)...dr A
—	3	4	Easiest Profession, The (French)...com A
—	1	8	Electronic Monster, The (British)...mys-mel A
1	2	1	Elevator to the Gallows (French)...dr A
1	8	4	Elmer Gantry...dr-c A
—	2	1	Enemy General, The...war-dr A
—	1	2	Escape from Terror...mys-mel-c AY
1	2	1	Exodus...nov-c AY
—	6	9	Expresso Bongo (British)...dr A
1	3	1	Fall of the House of Usher, The (British)...mel-c AY
—	2	6	Female, The (French)...dr-c A
—	2	1	Female Fiends...mel A
—	2	1	Ferry to Hong Kong (British)...mel-c AY
—	3	—	Fidelio...mus-dr AY
—	2	1	Five Bold Women...wes-c A
—	6	8	Five Branded Women (Italian)...war-mel A
—	10	4	Flame Over India (British)...adv-c AY
1	3	7	From the Terrace...nov-c A
3	6	3	Gallant Hours, The...war-dr AY
—	—	3	Get Outta Town...cri-mel A
—	2	1	G.I. Blues...mus-com-c AY
—	6	5	Giant of Marathon, The (Italian)...adv-c AY
8	8	1	Glenn Miller Story, The (reissue)...mus-biog-c AY
—	1	2	Great Imposter, The...dr A
—	3	2	Hannibal (Italian)...dr-c AY
—	2	4	Head of a Tyrant (Italian)...dr-c A
—	1	2	Heaven on Earth...dr-c AY
—	1	2	Hell to Eternity...war-dr A
—	4	8	Hercules Unchained (Italian)...adv-c A
—	3	—	High Time...com-c AY
3	5	3	Hiroshima, Mon Amour (French)...war-dr A
—	2	4	Holiday Island (Italian)...dr-c A
—	—	—	House of Usher, See Fall of the
—	2	1	I Passed for White...soc-dr A
1	5	4	Ice Palace...dr-c AY
2	9	1	I'm All Right, Jack (British)...com A

A	B	C		
—	4	3	In the Wake of a Stranger (British).....	mys-mel AYC
—	1	2	Incredible Petrified World, The.....	mel AY
3	1	1	Inherit the Wind.....	dr A
—	3	1	It Started in Naples.....	dr-c A
—	1	4	Jailbreakers, The.....	soc-mel A
2	4	2	Jazz on a Summer's Day.....	mus-doc-c AY
—	2	1	Jovanka and the Others.....	war-dr A
—	1	2	Juke Box Racket (British).....	mus-com AY
—	2	1	Key Witness.....	cri-dr A
2	8	3	Kidnapped.....	adv-c AYC
—	4	2	Last Days of Pompeii, The (Italian).....	dr-c A
—	1	3	Law, The (French).....	dr A
—	3	—	League of Gentlemen (British).....	cri-com A
—	1	6	Leech Woman, The (British).....	mel A
—	7	3	Lesson in Love, A (Swedish).....	dr A
—	2	1	Let's Make Love.....	com-c A
—	2	1	Little Rascals Varieties.....	com AYC
—	6	2	Lost World, The.....	sci-mel-c AY
—	2	1	Love Specialist, The (Italian).....	com-c A
—	2	4	Macumba Love.....	mel-c A
—	2	1	Malaga.....	dr A
2	6	1	Man in a Cocked Hat (British).....	com AY
—	1	2	Menace in the Night (British).....	cri-mel AY
—	4	3	Michael Strogoff (French).....	dr-c AY
—	—	3	Missile to the Moon.....	sci-mel A
—	1	2	Model for Murder (British).....	cri-mel A
—	—	3	Monika (Swedish).....	dr A
—	—	3	Morals Squad.....	cri-dr A
—	7	6	Mountain Road, The.....	war-dr AY
—	—	3	Mugger, The.....	cri-mel A
—	5	3	Murder, Inc.....	cri-dr-c A
—	2	3	Music Box Kid, The.....	cri-mel A
—	3	4	My Dog, Buddy.....	com AYC
—	3	—	Mysteries of the Deep.....	doc-c AYC
—	3	2	Never Let Go (British).....	cri-mel A
—	1	2	Never on Sunday (Greek).....	com A
—	2	1	Never Take Candy from a Stranger (British).....	soc-dr A
—	2	1	Next to No Time (British).....	com-c AY
—	2	1	Nightfighters, The.....	war-dr AY
—	1	2	Nights of Lucretia Borgia, The (Italian).....	dr-c A
—	3	3	Noose for a Gunman.....	wes AYC
—	3	3	Nude in a White Car (French).....	mys-dr A
—	1	6	Oklahoma Territory.....	wes AYC
—	3	—	One Foot in Hell.....	dr-c A
—	3	—	One-Eyed Jacks.....	wes-c A
—	8	3	Operation Amsterdam (British).....	mys-mel AYC
—	3	3	Oscar Wilde (British).....	biog A
—	2	7	Pay or Die.....	mel A
—	4	7	Platinum High School.....	soc-mel A
3	7	6	Please Don't Eat the Daisies.....	com-c A
—	2	1	Please Turn Over (British).....	dr A
—	9	1	Poacher's Daughter, The (Irish).....	com AYC
—	6	9	Pollyanna.....	com-c AYC
—	3	4	Portrait in Black.....	dr-c A
—	2	5	Pretty Boy Floyd.....	cri-dr A
—	1	4	Prime Time, The.....	soc-doc A
—	4	6	Prisoner of the Volga (Italian).....	war-dr-c AY
—	—	3	Private Lives of Adam and Eve, The.....	com A
—	3	10	Private Property.....	dr A
—	1	2	Proper Time, The.....	soc-dr A
—	2	6	Psycho.....	mys-mel A
—	1	4	Pull My Daisy.....	soc-doc A
—	1	6	Rat Race, The.....	dr-c A
—	2	1	Reach for Tomorrow.....	soc-dr A
—	5	—	Rikisha Man, The (Japanese).....	dr-c AY
—	—	—	Ruth (see Story of)	

A	B	C		
—	4	7	Savage Eye, The.....	doc-dr A
—	3	—	Savage Innocents.....	adv-c AY
—	1	3	School for Love (French).....	dr A
—	4	2	School for Scoundrels (British).....	com A
—	3	—	September Storm.....	dr A
—	—	—	Sergeant Rutledge (See Trial of)	
—	—	3	Sergeant's Daughter, The (German).....	dr A
—	1	11	Seven Thieves.....	cri-mel A
—	—	3	Sexpot (French).....	dr A
—	—	3	Shameless Sex (Italian).....	dr A
—	—	3	Sign of Zoro.....	adv AYC
1	11	4	Sink the Bismarck (British).....	war-dr AYC
—	—	1	Ski Troop Attack.....	war-mel AY
—	—	3	Skyscraper.....	doc-c AYC
1	4	—	Song Without End.....	mus-biog-c AY
—	3	1	Sons and Lovers (British).....	dr A
—	3	—	S.O.S. Pacific (British).....	mel A
—	—	3	Spartacus.....	dr-c A
—	4	2	Stop! Look! and Laugh!.....	com AYC
—	1	2	Storm of the Pacific, The (Japanese).....	war-dr-c AY
2	12	3	Story of Ruth, The.....	dr-c AYC
—	4	8	Strangers When We Meet.....	dr-c A
—	2	5	Stranglers of Bombay (British).....	mel A
—	—	1	Studs Lonigan.....	nov A
—	3	8	Subterraneans, The.....	mus-com-c A
—	2	1	Summer of the 17th Doll (British).....	dr A
—	1	2	Surprise Package.....	cri-mel A
—	2	3	Sword and the Cross, The (Italian).....	dr-c AY
1	4	9	Tall Story.....	com A
—	3	1	Tarzan, the Magnificent (British).....	mel-c AY
—	—	3	Teenage Zombies.....	mel AY
1	10	3	Third Voice, The.....	cri-dr A
—	3	5	13 Fighting Men.....	war-dr-c AYC
—	3	2	13 Ghosts.....	mys-mel AYC
—	2	1	39 Steps, The (British).....	mys-mel-c AY
—	5	6	This Rebel Breed.....	soc-mel A
—	2	6	Threat, The.....	cri-mel A
—	2	7	Three Came to Kill.....	mys-mel AYC
1	6	7	Three Murderesses (French-reissue).....	com-c A
—	1	3	Three-Penny Opera, The (German).....	mus-dr A
—	2	1	Thunder in Carolina.....	mel-c AY
1	3	1	Time Machine, The.....	sci-c AY
2	6	1	To Live (Japanese).....	dr A
—	3	8	Too Soon to Love.....	soc-dr A
—	—	3	Trapped in Algiers (Italian).....	cri-mel-c AY
—	12	4	Trial of Sergeant Rutledge, The.....	war-dr-c A
1	3	3	Trials of Oscar Wilde, The (British).....	biog-c A
—	3	4	Twelve Hours to Kill.....	cri-mel AYC
—	3	4	Twelve to the Moon.....	sci-mel AYC
—	2	1	Under Ten Flags (Italian).....	war-dr A
2	9	4	Unforgiven, The.....	wes-c AY
—	3	4	Valley of the Redwoods.....	mel A
—	6	3	Virgin Island (British).....	com-c AY
—	5	6	Visit to a Small Planet.....	com AY
—	8	4	Wake Me When It's Over.....	war-com-c AY
—	6	2	Walk Like a Dragon.....	dr AY
—	—	3	Wasp Woman, The.....	cri-mel A
1	9	3	When Comedy Was King.....	com AYC
—	2	2	Why Must I Die?.....	soc-mel A
—	—	3	Wicked Go to Hell, The (French).....	dr A
—	2	1	Wife for a Night (Italian).....	dr A
—	10	4	Wild River, The.....	dr-c AY
—	9	3	Wind Cannot Read, The (British).....	war-dr-c A
1	2	1	World of Apu, The (India).....	dr AY
4	5	1	Would-be Gentleman, The.....	dr-c AY
—	1	2	Young Jesse James.....	wes-dr A

The Consumers' Observation Post

(Continued from page 4)

TO FLUORIDATE OR NOT TO FLUORIDATE municipal water supplies has been a point of contention in many parts of the country. Since fluoridated water at best can only be expected to be effective in treating very young children, older folk have objected to the use of this shotgun method on the basis of expense, including waste of municipal funds, and possible danger to the sick and elderly. It is now possible to fluoridate water at home with a few drops of a fluoride preparation called Les-Cav, obtainable on a doctor's certificate in New York, New Jersey, Washington, Massachusetts, Nebraska, Michigan, and California. The preparation is put out by Crookes-Barnes Laboratories, Wayne, New Jersey.

* * *

IF YOU SMOKE IN YOUR CAR, keep a window open while driving. That warning comes from a Ford Motor Company publication, which points out that the smoke of only three cigarettes leaves enough carbon monoxide to bring your vision to the danger point.

* * *

IN CLOSING UP YOUR SUMMER HOME, take a tip from the experts. Make up a list and check the points off one by one as you attend to them. Here are a few suggestions: Chimneys should be covered with screening to keep out squirrels that can turn the house into a shambles. The fireplace should be covered with boards to keep dirt from blowing in. Put all candles, soap, matches, boxed food staples, and paper towels, napkins, and toilet paper in metal containers tightly closed to protect them from mice (which love paper). In seashore areas, it is wise to board windows and doors tightly to prevent sand or water from being blown in by high winds. Garments and fabrics should be stored in heavy plastic garment bags, trunks, or wooden chests. Copious use of moth balls or crystals is sometimes a deterrent to attacks by mice and other animals. All lamps and electrical devices should be disconnected. All cans of paint, and especially wiping and cleaning rags, should be disposed of. Leave the refrigerator door ajar to prevent the development of a musty smell. Have the water turned off and the plumbing drained of every bit of water to avoid damage from freezing. Notify the public utilities to discontinue service. Then turn the key, try the door, and hope that all will be well when you return in the spring.

It's OFF THE PRESS—

the big, new, 224-page ANNUAL!



Summarizing the results of unbiased tests of many different makes and brands by CR's engineers and scientists, it is conveniently indexed for ready reference. Many hundreds of products are rated by brand name on the basis of tests and expert examination. It has been called the "consumer's guide" to the market, the "handbook of buying," and the "most thumbed book in the house."

The ANNUAL is supplemented each month by the reports of new tests presented in CONSUMER BULLETIN. To keep up-to-date on quality products and how well they perform in carefully supervised laboratory tests, the thrifty and discriminating consumer needs both. There is a special combination price for the two.

Just turn the page for rates and a ready-to-use order blank.

HUMAN ABILITY TO DRIVE A CAR SAFELY may be adversely affected by many drugs that are in common use today. Dr. L. G. Norman of London, England, has suggested that physicians should warn patients of the possible dangers in driving after taking certain drugs including hypnotics, sedatives, tranquilizers, antihistamines, hypotensive drugs, and amphetamines. He cautions that patients under treatment with drugs, such as barbiturates, should be warned of the additive effects of alcohol, which, even in an amount normally regarded as safe, may seriously impair their driving ability.

* * *

BEFORE BUYING A FUR COAT OR A FUR PIECE of any kind, decide first of all how much money you can afford to spend and then look over the types available to see which variety best fits into the budget. It is wiser to buy the top quality of an inexpensive fur than a lower quality of a more costly variety. A little booklet "Facts You Should Know About Furs" gives a table of the most commonly sold furs, along with an indication of their relative durability, and some idea of the price range in general terms. With it in hand, do a little comparison shopping to get an idea of what the current prices are in actual dollars and cents. The leaflet may be obtained for 10 cents from local Better Business Bureaus or the Association of Better Business Bureaus, Chrysler Bldg., New York 17.

* * *

IF YOU WANT TO LOSE WEIGHT and can't stick to a prescribed diet, go to the hospital for a short stay. This is the advice of Dr. Alvin R. Feinstein of New York University College of Medicine who has found that fat people who were in a "completely restricted environment" such as a hospital took off excess poundage in proportion to the prescribed reduction in calories. He reported that no other method worked so well. It seems that overweight people need a watch dog to make certain that they do not cheat on the lower food intake required to reduce successfully.

* * *

UNITED STATES COTTON, TOBACCO, AND FLOUR are poor in quality, according to The Wall Street Journal, which reports complaints by foreign buyers. They find U.S. cotton poorly packaged and dirty, requiring surface cleaning before it can be used. The quality of United States tobacco is slipping due to the use of a growth control spray, maleic hydrazide, which is said to affect the taste and burning quality. Other buyers complain of poor quality leaf because of too-close planting and the use of too much fertilizer. United States flour is considered not high enough in quality for European baking habits, and it lacks uniformity. It would seem that one solution of our present oversupply of agricultural commodities would be to emphasize or put a premium on top quality instead of subsidizing huge quantities of low-grade products.

Consumer Bulletin

WASHINGTON, NEW JERSEY

Please enter my order as checked. I am enclosing my check (or money order) for \$_____.

Begin subscription with _____ issue.

NAME _____

STREET _____

CITY & ZONE _____ STATE _____

9-60-N

Please check your preference:

☐ I enclose \$7 (Canada & foreign, \$7.20) for one year's subscription to Consumer Bulletin monthly (12 issues) AND the big new 1960-61 224-page Annual Bulletin.

☐ New ☐ Renewal

☐ I enclose \$5 (Canada & foreign, \$5.20) for one year's subscription to Consumer Bulletin monthly (12 issues).

☐ New ☐ Renewal

☐ I enclose \$2.50 (Canada & foreign, \$2.75) for a copy of the big new 224-page 1960-61 Annual Bulletin alone.

A new kind of ceramic cookware



The ceramic frying pan made by the Iroquois China Co.

HOUSEWIVES are always looking for something new to cook in. A new kind of kitchen utensil not available until very recently is ceramic cookware, a kind of china that is so heat resistant that it can be used for top-of-the-range cooking as well as for baking in the oven.

Not that ceramic cooking utensils themselves are new. They have been popular for oven cooking for centuries, as any museum's collections will show. Even the centuries-old ones are beautiful in their way, and the new ware developed by American manufacturers is also of fine appearance, smooth of finish, and light in color.

The frying pan illustrated is made of the new "casual" china recently developed by American manufacturers (see *CONSUMER BULLETIN*, June 1960). It can be used according to its label as follows:

"Flame proof for cooking. . . use me for cooking, frying, baking. Do not heat or cool me too fast and never heat me when empty."

In addition, the ware carries the following guarantee:

"Any piece from your Informal china service that breaks, cracks or chips—for any reason—within the first year of purchase will be replaced . . . free!"

Vitrified ware, of which this pan is made, differs from pottery or earthenware in that it is not porous. In tests made by Consumers' Research, dinnerware of this make and pattern was found to have very good resistance to breakage by impact, chipping, and thermal shock. Cookware, of course, is likely to be handled more often than dinnerware and with less care to avoid hard knocks and impacts.

In practical use tests, the pan proved satisfactory for top-of-the-range cooking when used on either gas or electric ranges, and for oven cookery. It was slow to use on top of the range because of the care taken to avoid heating it too rapidly. This would be of some importance to a person who would have reason to prepare a meal

quickly without risk of damaging the utensil. But the results were, in general, satisfactory, except that one housewife who had a gas range found that the bottom heated too unevenly to permit frying eggs in butter to her satisfaction. Another housewife who also used the pan on a gas range did not have any difficulty and found it satisfactory for cooking bacon and eggs. On electric surface units, the ware proved satisfactory for top-of-the-stove cooking of vegetables (asparagus and cabbage) and frying eggs and pork chops. The pan also performed satisfactorily in oven cooking of a dish of macaroni and cheese.

One obvious advantage was that the pan was sufficiently attractive that foods could be served hot, from the same pan they were cooked in.

Users found some disadvantages in the weight of the pan. It weighed 2 pounds without the lid, 3½ pounds with the lid. Although the handle remained cool in top-of-the-stove cooking, the handle of the lid did not. The pan was easy to clean; even macaroni and cheese cleaned off easily—a boon to the housewife who is irked by hard-to-clean pots. One user objected to the hollow handle, however. Unless she remembered to empty the water from the handle after washing the pan, she took the risk of spilling water over the front of her apron!

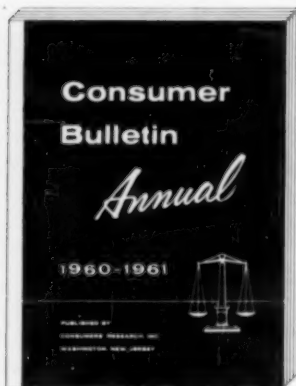
A. Recommended

Iroquois, Informal, Rosemary Frying Pan (Iroquois China Co., Syracuse 9, New York) \$8.95. China frypan for use in the oven or on a surface burner when heated slowly. Heavy. Weight, 3½ lb. with lid, 2 lb. without.

Dinnerware of this brand showed very good resistance to breakage by impact, chipping, and thermal shock in test.

Easy to clean. Other cook-and-serve pieces, made of the same ware, including saucepan, casserole, Dutch oven, and platter are also available in this and in three other patterns, *Harvest Time*, *Lazy Daisy*, and *Blue Diamonds*.

*Just
off the
press ↓*



The consumer's encyclopedia for wise buying. A handy, well-indexed summary of products previously tested, with much new information and advice for consumers on many important subjects.

**There is a convenient
order blank on page 38
for new subscribers.**

**Some of the items that are
COMING
IN FUTURE BULLETINS**

1961 television receivers

Electric shavers

1961 American automobiles

Built-in electric ranges

Sugar—enemy of a good diet

Garbage disposal units

What's wrong with American cars?

Food-freezer plans

Scissors and shears

Silver cleaners

Stainless steel cutlery

Rechargeable flashlights

Consumer Bulletin

The pioneer consumer magazine, testing and reporting on products since 1928.

Published by Consumers' Research, Inc., Washington, New Jersey.

